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The Natural System of Life Insurance:

BEING

A COMPLETE EXPOSITION AND DEFENCE OF THE PRINCIPLES AND PRACTICE

OF

THE DOMINION Safety Fund Life Association.

BY

J. H. WRIGHT,

SUPERINTENDENT OF AGENCIES.

"Associations for the insurance of lives are to be ranked among the very noblest institutions of civilized society, and their usefulness can be attested by thousands of happy and contented families, rescued by their means from the bitterness of poverty and the degradation of charity."—LORD BROUGHAM.

"Non mihi sed meis vivo."

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PREFACE.

WARFARE, AND WHEREFORE?

A BITTER warfare has long been raging between the advocates of Life Insurance by Level-Premiums, and the friends of Insurance by Post-Mortem Assessments, — the one wielding the magic power of immense money accumulations, — the other appealing to popular prejudice against the dangers of powerful monopoly.

The battle is not yet over, — it still rages all along the line.

Many are confused by the loud warnings of each — not to entrust the protection of their dependent ones to the other; while others blindly adhere to the system for which, without adequate information, they may have conceived a preference.

The mission of this little work is to lay before the public of this Dominion enough of the principles and history of Life Insurance to enable each dispassionate reader to decide intelligently upon the merits of the contending systems, and whether there is not a new and yet better system of protection to the widow and orphan of the future than has heretofore been offered to the Canadian public.

It shows that neither of the rival systems is sole proprietor of all the merits, and neither, of all the defects; that the popular uprising against that system which so long held undisputed sway was not without reason; that the fierce assaults against which Assessment Insurance has ever had to battle, are not without cause.

The SAFETY FUND SYSTEM is the result of an intelligent effort to combine the merits, and avoid the defects, of both its older competitors; and while, in these pages, the defects of each are fearlessly exposed and their merits cheerfully acknowledged, our one object is to define and vindicate our own principles.

This little book may result in a saving of ammunition to those who have been wont to waste it in attacking principles

we do not profess; and we trust it may render our friends indifferent to the cowardly warfare of satire and innuendo to which, baffled and defeated by the impregnability of our principles, our enemies have been compelled to resort.

Throughout its pages our every position is fortified by appeals to experience and to the unbiassed opinions of recognized experts in the science of Life-Insurance.

J. H. W.

St. John, N. B., Feb. 10, 1885.

THE

Natural System of Life Insurance.

I.

WHAT IS LIFE INSURANCE?

"*It is the standing together, shoulder to shoulder, of hosts of manly men, to defend each other's homes from the enemy that shoots on the sly and in the dark. It is the realization of fraternity, without the destruction of independence and individuality. It is a charity without cant, which enriches the giver and does not humiliate the receiver.*" — ELIZUR WRIGHT.

THE possible widow and orphan is the active principle in Life Insurance. If we could circumscribe our devotion to the happiness and well-being of dependent ones by the uncertain tenure of our own life, we would have no need for insurance. But this we cannot do. Love of offspring — a part of our very nature — reaches beyond the limits of our own life to the end of theirs. It demands that we should exert our powers, while we live, in providing for their support and education, and urges the provident father to protect them against loss of these by the possible early failure of his powers in death. *To furnish this protection is the exclusive function of life insurance*, and the motives which prompt the husband or father to invoke the security which it offers are among the highest and purest that animate the human breast.

"It is a strange anomaly," says Benjamin Franklin, "that men should be careful to insure their houses, their furniture, their ships, their merchandize, and yet neglect to insure their lives, surely the most important of all to their families, and far more subject to loss." They are prompted to the one only by consideration of business prudence, and expect no other return for its cost than immunity from personal loss; they are urged to the other by further considerations of parental and conjugal faithfulness, and the return which it offers for its cost is the consciousness of having discharged a duty towards dependent ones, by thus "substituting the certainty of a snug patrimony for the uncertainty of the continuance of their own life."

As *protection* to the *estate*, and the consequent release from anxiety is the only return offered by fire or marine insurance for its cost, so *protection* to the *family*, with its consequent satisfaction and release from anxious care, is the only return life insurance offers for its cost. And what other return does the provident father need? Living, he provides for his household by his own skill and energies; and, dying, their needs are supplied by his own prudent forethought in placing the seal of the life insurance company upon his door.

The regular physician will diagnose the particular case of his several patients, and apply a special remedy to each; but the empiric will compound a nostrum from a number of remedial agents, and assure the public that his is a specific for "every disease incident to humanity." How like his insidious advertisement is the following familiar nugget from ordinary life insurance appeals: "No matter what may be the object of your solicitude — be assured — whether you are thinking of the maintenance of general health (?) or of comfort and competence in your old age (?), **or of the interests of wife and children when you may be no more,** or of a provision for your boy when he reaches mature age (?), or of the happy marriage and wedding portion of your little daughter (?) one day to be, you hope, a blushing bride, now a tiny, prattling fairy of two or three years — never mind the subject matter — be assured." Life insurance is, indeed, the only sure specific for **"solicitude for the interests of wife and children when you may be no more;" but this is its only function.**

It is the function, *not of life insurance, but of the savings bank*, to accumulate deposits by which alone the other "objects of solicitude" can be secured.

The combination in the same system of the function of life insurance with that of the savings bank is thus regarded by *Insurance Commissioner Tarbox, of Massachussetts*: — "To unite, more than need be for the assurance of its contracts, the proper business of an insurance company with the functions of a savings bank, makes a combination both incongruous and unwise. . . . The company thereby needlessly assumes the obligations and responsibilities of a banker in addition to the obligations and responsibilities of an insurer, and prejudices its safety as an insurance institution by exposure to the dangers incident to its banking operations."

Every benefit beyond simple *protection*, offered by an insurance company, *must be paid for in excess of the cost of that protection*, and far greater and more satisfactory benefits would

result from an investment of that excess in regular savings institutions, or in the business capital of the assured.

INSURE FOR PROTECTION,
AND LEAVE BANKING TO THE BANKS.

II.

MYSTERY.

The inner workings of the life insurance office have long been enshrouded in mystery. The agent has ever been eloquent in his appeals on behalf of the possible widow and fatherless child, by which he has stirred to action the noblest and most unselfish impulse of the human breast: he has painted for avarice fervid pictures of wealth flowing from the insurance policy in the form of endowments, Tontine profits, and annual dividends; but he has never had the temerity to invade the inner court of this "church of financial salvation," and expose to vulgar gaze its hidden mysteries. Within the veil is being drawn annually over $100,000,000 from the earnings of the noblest men of America, while only about $25,000,000 is annually returned to their widows and orphan children. For over a century, why one hundred dollars should be collected from the insured for every twenty-five dollars returned to the widow, was seldom asked and never answered. Meanwhile life insurance "has grown upon the country like a prodigious dream, having palaces, powers, and potentates of its own, with incomes that little kings might envy."

But the present age is more inquisitive and practical in its spirit. Dogma and prescription have lost their power over the public mind. Even life insurance is called upon to answer How? and Why? and the answer has been so incomplete and unsatisfactory that a rival system, boldly assailing the principles and practice of the ancient oligarchy, and as boldly proclaiming its own, has met with such popular favor that, after a contest of less than a score of years, it far exceeds its powerful antagonist in the magnitude of the interests committed to its charge. But, that men are prone to rush from one extreme into the other is painfully illustrated by the history of this reaction against the system of level premium insurance, with its extreme expense and pyramids of reserves. The tendency has been to reject as false every principle upon which that system is based — to discard, alike, the gen-

uine and the spurious; and, as a result, co-operative or assessment insurance has too often brought only disappointment to its friends and patrons.

It is the purpose of these pages to remove the veil and show what are the principles of the science of life insurance, and the developments of past experience; to cull the true from the false, and demonstrate that the system we advocate occupies the true middle ground between the two extremes of expensive insurance by level premiums and the uncertain or indefinite insurance by *post mortem* assessments; that it embodies every element of perpetuity and every principle of equity and economy which the science of life insurance recognizes, or the experience of the past has developed.

"We can now look back upon the past experience of those plans and take them as a basis upon which to found other, and possibly more far-reaching methods, and from them we can gather facts upon which we may reasonably predicate sound future results."—*William McCabe, F. I. A., Eng., Man. Director North American Life.*

"Life insurance is worth all it costs; but any improvements in that system ought surely to be considered and commended as a blessing to the community."—*Sheppard Homans.*

III.

THE LEVEL-PREMIUM ANALYZED.

The level-premium on every life policy is composed of three distinct elements: (1) Cost of Insurance, (2) Reserve, (3) Loading.

COST OF INSURANCE.

It is important to get a clear conception of this element, and to do so, we shall suppose each of 1,000 men, 24 years of age, to deposit $1 in bank, under an agreement that the $1,000 thus deposited shall be paid to the family of the first to die. A death occurs; the $1,000 is paid to the widow; a healthy man, the same age as deceased, takes his place, and the deposits are repeated. At the end of the year they have had *eight* deaths (American Experience Table of Mortality), each has paid $8, and the eight widows have received the $8,000. Each survivor has had one year's protection to the extent of $1,000, and **$8** WAS THE COST OF INSURANCE that year. Should any wish now to discontinue, he has had full

value, in the protection furnished, for the money paid—the bank has no money on deposit with which to give him a surrender value—the whole amount is now ministering to the necessities of the eight bereaved wives who have been deprived of the support the willing hands of their husbands had afforded.

Let the deposits be continued, under the same conditions, year after year. When each of the 1,000 associates is 36 years of age, they will have nine deaths, making the COST OF INSURANCE $9 that year; when 41 years of age, ten will die, making $10 the COST OF INSURANCE that year. Thus, the COST OF INSURANCE any year is directly dependent on the number of deaths that year to the 1,000 living; and as the rate of annual mortality is necessarily greater as age advances, so the COST OF INSURANCE must necessarily increase with the age of the insured.

"Apart from the expense of conducting the business, the COST OF INSURING $1,000 for one year at a given age *will be as many dollars as there will be deaths in one year of 1000 persons insuring that sum at that age.* . . . A man commonly insures a certain sum on his life just as he does on his house, by paying the same premium year after year. Yet the *risk of loss on his life is very different at different ages,* while that of one on the house commonly remains the same. It is this paying for a *variable risk with a constant premium* which is the peculiarity of life insurance, and the source of all its mystery." —*Elizur Wright.*

This mystery,—how the PRICE of insurance can be the same year after year as age advances as at age of entry, and yet the COST increase with each year of life, will be deepened by examining the effect of admitting new entrants to our theoretical society.

We have seen that the NATURAL COST OF INSURANCE at age 24 is $8.00; at age 36, $9.00; and at age 41, $10.00.

Admit now, with our original group, aged 41, an equal number aged 24. The deaths will be 10 + 8 = 18 in the 2,000, making $9 the cost to old and young alike. The former have gained and the latter lost $1 each as a result of the union.

Had the original group attained the age of 60 years when the union occurred, the result would be much magnified, as the natural cost at that age is $26. There then would be 26 + 8 = 34 deaths, making the cost to each $17. The old would gain $9 by the union, while the young would pay $9 for their philanthropy.

At this stage let a third group at the age of 41 enter. Payment being graduated by the NATURAL COST at age of entry, they must pay 25 per cent. more than their associates all of whom entered at age 24. The deaths in the 3,000 will be 26 + 8 + 10 = 44, making $44,000, the total of death losses for the year. The cost to each of the old members would be $13.54 — a gain of $12.46 upon their natural cost; to each of the young members $13.54 — a loss to them of $5.54; to each of the middle-aged $16.92 — a loss to them of $6.92.

All this confusion and inequity would be avoided by each paying into a common MORTUARY Fund the natural cost of his present age, without reference to his age at entry. Thus:

1,000	aged	60,	pay	$26.00	each	= $26,000
1,000	"	41,	"	10.00	"	= 10,000
1,000	"	24,	"	8.00	"	= 8,000
Total payments to Mortuary Fund = total death losses						= $44,000

And this is the plan really practiced. How this can be done, and the fact of his paying an increasing cost concealed from the assured, can be understood only by studying the nature of the second element of the level-premium.

RESERVE.

Much is said and written on the reserves of Level-Premium Life Insurance, but few understand what they are and what they are for. Yet there is no need for confusion here. The NATURAL method of insurance would be to pay the cost of risk each year, gradually increasing from $8 at age 24 to $26 at age 60; but the ARTIFICIAL method is to charge $19 each year from the first as a *level*-premium. This involves an over-payment for many years, which the company banks to the credit of the policy and uses in after years to help the $19 pay the then increased cost of the risk. These over-payments of the earlier years constitute the reserve, whose only function is to pay for insurance to be furnished in the distant future.

The general impression of this fund is that it is *wealth*, a guarantee of stability, security to the policy-holder that the contracts made by the company will be fulfilled; that, for example, should an epidemic occur, this Reserve Fund would be poured into the Mortuary Fund, and thus save from loss the dependents of the insured who die. But the fact is, the Reserve Fund is not *wealth* but a *debt*, not *strength* but *weakness*, and cannot, under any circumstances, be used to discharge claims upon the Mortuary Fund. The moment

it is touched for such a purpose the Company is bankrupt, though it has millions of reserves besides. Reserves have crushed scores of companies, and have never rescued one.

An eminent authority, Amzi Dodd, formerly mathematician and now president of the Mutual Benefit Life Insurance Company of New Jersey, in his report to his Board of Directors (Jan. 1883) thus explains to them the nature and purpose of their Reserve Fund of *thirty-three million* dollars:

"It arises from the single circumstance that the risk of death (and therefore the COST OF INSURANCE) increases with each year of life, while the premium which is paid on the policy differs in amount from the cost of insurance. This increasing cost would be the NATURAL premium. For the sake of convenience, the sum ordinarily agreed to be paid in each year is different, and is called the ARTIFICIAL premium. During many years after the policy is issued, the artificial premium is greater than the natural, and in after years it is less. In the case of a policy issued at the age of 35, the artificial premium is greater than the cost of insurance till the insured reaches the age of 56. After that age it grows rapidly less.

"Out of this state of things arises the whole matter of RESERVES, so fundamental and so much discussed in life insurance. Simple as it is when stated, it is remarkable how often it is imperfectly or obscurely conceived. IF THE POLICY CONTRACT, INSTEAD OF CALLING FOR THE SAME PREMIUM EACH YEAR, SHOULD CALL FOR THE GRADUALLY INCREASING NATURAL PREMIUM, THERE WOULD BE NO NEED OF RESERVES OR ACCUMULATED FUNDS. The company and its members would do business on the rule of "PAY AS YOU GO." THE POLICY-HOLDER WOULD GET YEARLY THE EQUIVALENT OF HIS MONEY PAID. But under the system almost universally in use, he pays largely in advance, and the company holds the money to offset against insurance in after years, when the insured does not wish to be called on for larger payments. The reserve fund thus arising is sometimes called the WEALTH of life insurance companies. It is obviously not such, but a DEBT from the corporation to its members: a great trust fund confided to the managers."

"The fact is, the reserve is simply and purely a bank deposit, belonging for life or death to the depositor, and HAVING NO MORE REAL CONNECTION WITH THE INSURANCE RISK THAN A CORRESPONDING DEPOSIT IN A BANK ACROSS THE STREET WOULD HAVE." — *Emory McClintock, Actuary Northwestern Mutual.*

"No part of the reserve can be used to pay a death claim on any policy save the one to which it belongs, — any more than a bank of deposit can use the funds of one depositor to make good its losses to any other." — *E. D. Williams, Consulting Actuary.*

LOADING.

Expense is inseparably attached to the efficient management of life insurance under any form whatever, and a sum for this purpose — called LOADING — is added to the two elements of the level-premium already described. Though this is the primary source from which expense is paid, the whole SURPLUS, yet to be explained, is available for that purpose, and practically the managers are unrestricted in the amount so consumed.

The following analysis, by Elizur Wright, of a level-premium at seven different periods in the life of a policy, will clearly illustrate its three-fold nature, the function of each of the elements composing it, and their relation to each other:

$10,000.

WHOLE LIFE POLICY. AGE AT ENTRY 32. LEVEL PREMIUM — *Payable annually for Life* — $241.00.

FIRST YEAR. THEN AGE 32.

Cost of Insurance,	**$83.30**
Deposit for Reserve,	97.10
Loading,	60.60
Total Premium,	$241.00

SIXTH YEAR. THEN AGE 37.

Cost of Insurance,	**$87.00**
Deposit for Reserve,	93.40
Loading,	60.60
Total Premium,	$241.00

ELEVENTH YEAR. THEN AGE 42.

Cost of Insurance,	**$91.00**
Deposit for Reserve,	89.40
Loading,	60.60
Total Premium,	$241.00

SIXTEENTH YEAR. THEN AGE 47.

Cost of Insurance,	**$100.90**
Deposit for Reserve,	79.50
Loading,	60.60
Total Premium,	$241.00

TWENTY-FIRST YEAR. THEN AGE 52.

Cost of Insurance,	**$122.70**
Deposit for Reserve,	57.70
Loading,	60.60
Total Premium,	$241.00

TWENTY-SIXTH YEAR. THEN AGE 57.

Cost of Insurance,	**$148.10**
Deposit for Reserve,	32.30
Loading,	60.60
Total Premium,	$241.00

THIRTY-FIRST YEAR. THEN AGE 62.

Cost of Insurance,	**$180.60**
Deduct from Reserve,	.20
Paid by this year's Premium,	$180.40
Loading,	60.60
Total Premium,	$241.00

Total amount in Reserve at end of this year, int. 4 per cent, **$4,652.70**

It will be observed from the above:

1st. That the assured has paid each year $60.60 for expenses;

2nd. That he has paid each year the natural cost of his insurance, which has increased from $83.30 the first year to $180.60 the thirty-first year;

3rd. That during these years he has made deposits in RESERVE, in sums from $97.10 downward, to the amount, at 4 % int., of $4,652.70;

4th. That the deposits to RESERVE cease the thirty-first year, and it contributes 20 cents to help the premium pay that year's COST OF INSURANCE and EXPENSE.

Each year thereafter, as the cost of insurance continues to increase, the contributions from RESERVE will gradually become greater.

IV.

PAID-UP-POLICY — SURRENDER VALUE.

Should the assured under the policy whose premiums are analyzed in the preceding chapter fail to pay his thirty-second premium, he would receive no consideration whatever for his payments to *cost of insurance* and *expense;* and, *if they have been reasonable in amount, he has received their full value in the protection furnished.* As well might he claim that the price of a barrel of flour which his family has consumed and enjoyed is money lost, as that a reasonable price for that protection which sweetened his sleep for thirty-one years, and has been a perpetual shield to his household against ruin when his children were young and helpless, was money wasted.

But he is now sixty-three years of age: his family have grown up, and, perchance, no longer need that protection which was so great a boon a few years ago — the rather, he now needs money to support himself in his declining and unproductive years, that he may not be a burden to his children. He has paid $4,652.70 into the bank of the company to help pay for protection **not yet received;** and as the time approaches for its delivery he finds he has no need for the commodity, but great need for its price. He offers to surrender his policy, but finds that it makes no just provision for any contingency but death, and that he is under a bond of over four thousand dollars to go on with his payments. Even under the Massachusetts Non-Forfeiture Law, of his reserve he must forfeit $930.54 outright, and would receive but $3,722.16 worth of *future insurance*, under the condition that at his death all the unpaid premiums ($241 per year), with 6% interest, will be deducted from his claim.

If he insists upon receiving cash instead of future insurance, he is entirely at the mercy of the company.

Actuary Willey tells us that, "In deciding what surrender value should be paid on a policy, every company is a law unto itself, just as much as in the regulation of the annual premiums. Hardly any two companies have the same rules for determining the surrender value, and there are but few in which there is any fixed standard for computing it. . . . *A surrender* CHARGE *of* 25 *per cent. of the reserve is as low as the most liberal companies adopt, while many charge* 50 *per cent.*"

The holder of this policy has paid the increasing cost of all the insurance he has received, through thirty-one years, and all the expense chargeable to his policy, and has deposited, in addition, for insurance *not yet delivered* the sum of **$4,652.70;** but he can now withdraw that bank deposit, no matter how great his exigencies may be, only by forfeiting from **$1,163.17** to **$2,326.35** to his bankers. How precious this privilege of depositing in the life-insurance bank!

Amzi Dodd, speaking of the practice of the largest company in the world, says:

"They seldom pay, I am informed, more than 50, and often less than 50, per cent. of the Reserve; and when it is considered how large, within the past few years of pecuniary distress, has been the number of purchased policies, and policies forfeited entirely, it is apparent that large sums of money have been accumulated from these sources. . . . To illustrate: take the case of my own policy, issued in 1854; its

RESERVE value is now $4,200. I have paid the company fully for all the insurance I have had, and for all the expenses incident to my policy. If I say to the company, I have no need of the insurance, and great need of the money, and will give up my future insurance and take back the money I have advanced for it, the company will charge me for such a change from 50 to 60 per cent., *i.e.*, from $2,120 to $2,520."

Of the same Company Elizur Wright says: — "The lapses have been about as numerous as the remaining members, and have forfeited (from their reserve), or been charged on surrender, sums which aggregate latterly nearly a MILLION DOLLARS A YEAR." No wonder that the same authority, who has devoted the energies of a long life to a reform of the abuses of life insurance, exclaims almost in despair:

"The life insurance policy, BY REASON OF THE ACCUMULATION UNDER IT, is a trap which screws up tighter and tighter, till liberation comes only by death, or expiration of the term. When there is as perfect an understanding between the Company and the policy-holder as between the savings bank and the depositor, and there is no forfeiture out of proportion to the damage of non-fulfilment of contract, life insurance will recover its popularity, and take thorns out of the pillows of young fathers, who now shun it as they would a pestilence."

It is to bring about this perfect understanding between the DOMINION SAFETY FUND LIFE ASSOCIATION and its patrons that these pages are written.

V.

ORIGIN OF SURPLUS — DIVIDENDS.

No branch of our subject is so much descanted upon by life-agents, and so little understood by the public, as DIVIDENDS.

As one listens to the fervid eloquence of the solicitor, as he rings the varied changes upon the richness of this source of wealth to the assured, he fancies the Company possesses a secret unknown to other financial institutions, by which wealth can be created from nought. But not so — even the mystery of the dividend can be explained, and the world move on.

If the data upon which the level premium is calculated be exactly realized in practice, there would be no surplus, and no dividends; but as a fortification against fate and fickle

fortune, those data are altogether favorable to the Company, and in practice a surplus is the invariable result.

1st. The tables of mortality by which the COST OF INSURANCE is determined in calculating the premium, indicate a death-rate considerably higher than is realized in practice—especially in these latitudes. The tabular costs of the insurances furnished by the largest Canadian company for the year 1883-4 aggregated $437,085, while the actual cost was but $233,864.46, leaving a profit from this source alone of $203,220.54. As the actual cost was but 53½ per cent. of the assumed, a policy-holder paying $180.60 as his COST OF INSURANCE paid an over-charge of $83.98.

"Dividends to policy-holders are practically a misnomer. They are mainly a restitution of the over-payments which have been made in the premises." — *Actuary Willey.*

2nd. If the RESERVE earns a rate of interest higher than that assumed in its calculation — 4 or 4½ per cent. — there is a second source of profit to the company. The average rate earned in Canada in 1883 was over 6½ per cent. — leaving 2 or 2½ per cent. of the entire RESERVE as profit. The largest Canadian company, having a RESERVE of $4,640,257.47, thus derived a profit of $92,805.15.

This is just so much more paid by the policy-holders than they realize. Thus, in the case analyzed, if the assured pays his 32nd premium he has been allowed but 4 per cent. interest on his reserve the last year, while it was really worth 6½ per cent. If the 4 per cent. is his money, so must the additional 2½ per cent. be, and this amounts to $111.84, which should be added to his premium payment to give his actual premium for that year.

3rd. The richest source of profit is the forfeiture of the whole or a part of the RESERVE, by discontinuance, as briefly referred to already.

The really temporary nature of what are entered into as whole life engagements is a sad commentary on the fickleness of human fortunes and the instability of human purposes. Notwithstanding the fact that, "whether a man will be able to pay in some future year is often as much a matter of uncertainty as whether he will die in that year," men, over confident of their powers to battle with fortune, and of their own stability of purpose, are persuaded into taking upon themselves obligations requiring a life-time to fulfil, and to place themselves under bonds which increase as the years gather, that they will never change their purpose. The ag-

gregate of these bonds for persistent payment (reserve) held by the companies in America to-day is 480 millions of dollars — a sum equal to the combined value of the entire cotton crop of the world, and the silk crop of India, China, and Japan.

The usual result is the forfeiture of the bond. Prof. Van Amringe, of Columbia College, a most searching critic of the subject, declares: "Of every 100 policies which cease, but 10 will cease by death and expiry; 15 will be given up for a slight compensation, and 75 will be absolutely thrown away by the holders."

This opinion is very strikingly confirmed by the consolidated experience of thirty American life offices, since published. Of 1,027,529 entrants to those companies up to 1874, 411,092 had discontinued, and 44,485 had died, at that date, making over *nine* discontinuances to each death.

James T. Burns, consulting actuary, says: "The experience of the best life companies on this continent shows that not more than 10 out of every 100 insurers keep their policies in force for 20 years."

Nathan Willey, an actuary of eminence, says: "It is a lamentable fact that the policies, as a class, taken during the last few years, are short-lived; in the best companies only seven or eight years is estimated the average. And this is mostly owing to the dissatisfaction of the public and the misrepresentations which agents have made about future dividends, surrender values, liberality of the company, etc. Life insurance in this country has not been *overdone*, but it has been *badly done*, and a thorough reform is imperatively demanded. But the fault is not wholly on the part of the agents; the officers of many companies are equally to blame for furnishing the means and the opportunity of misrepresentation. They supply agents with printed documents giving wonderful hypothetical statements, which may be realized under certain conditions; THEY CAUSE GREAT EXPECTATIONS AND GIVE INFINITESIMAL RESULTS. . . . But more information now prevails in regard to this subject. Men are insuring now for insurance, and not for the promised dividends; they are buying insurance as a protection to their families against want, and not as an investment."

Elizur Wright says: "*By the gains of forfeiture*, companies of virtual swindlers, under the name of Life Insurance Companies, *wasting a full third of the funds entrusted to their care*, have existed through an entire generation and made a show of solvency and respectability. In reality, for ingenious rogues, a mutual life insurance company with the forfeiture

clause in its policies is an engine of plunder, with a principle of immortality in it."

The companies may "rob Peter to pay Paul" by making dividends from this rich source of profit; but the time will come when the man of enlightened conscience would rather win money at the faro bank or keno table, where the rich man is as liable to lose as the poor, than by this betting on persistence, where a considerable part or the whole of the RESERVE is the wager, and where the winnings accrue only to those whose continued good fortune enables them to keep up their payments, and the losses only to those who, by the misfortune of poverty, are compelled to forfeit those savings which might have rescued their homes from the sheriff's hammer, or saved their families from hunger.

How loudly does past experience call for a less costly system of protection, in which men will not be compelled to lapse by its extreme expense, and by which they will GET WHAT THEY PAY FOR WHILE THEY PAY — placing little in the hands of the company to forfeit!

All the profits obtained from the three sources named are added to the total income from LOADING; the expenses are paid with lavish hand; and what then remains is SURPLUS, a part of which is returned to the policy-holders as dividends.

A few more words of expert testimony and we shall leave this subject.

The Insurance Commissioner of the State of Maine, says: "This repayment to the policy-holder has no claim to any such cognomen as "dividend," and is all a delusion. It is merely a return to the owner of a part of the excess, previously taken out of his own pocket when he purchased his policy, or had it renewed. And it is only a part, inasmuch as a deduction has been made from the excess for the expenses of its own collection. It is, in fact, as if one should sell for a *dollar* an article of *fifty cents* value, and give back afterward *twenty-five cents* for a *dividend*. The railroad company and inn-keeper who should charge double fare to their customers in advance, and pay back one-half the surplus afterward, have an equal claim to credit for paying a rich dividend on their investment."

A careful student of the whole subject of life insurance, in an able paper in *Harpers' Monthly Magazine*, January, 1881, remarks: "The whole system of dividends to policy-holders is a vicious one. The promised dividends are a bait to the public, and the occasion of an irresistible temptation to the officers of the companies: the excessive premiums which make them possible demoralize the business. The more

nearly the premium approaches the minimum that is consistent with safety, the better both for the companies and for the assured."

LET US CARRY THIS LESSON WITH US.

VI.

IS THE RESERVE NECESSARY, AND THE SYSTEM ADAPTED TO THE REAL NEEDS OF THE PEOPLE?

EXPERT TESTIMONY.

The RESERVE is certainly necessary if we would pay a level-premium. The cost of insurance increasing with every year of life is no fiction, but the result of a fixed law of nature which it is madness to attempt, by any ingenious device, to frustrate. Assessment insurance has generally ignored this basal principle in the science, and the resulting confusion has been illustrated by our theoretical society, and more forcibly in practice by the disaster which has already overtaken many honest, but misguided, attempts to fly in the face of nature's decree. But, as the reserve is only a cloak beneath which the advancing cost of insurance is collected, why not pay that advancing cost, without the cloak? Amzi Dodd tells us:—

"IF THE POLICY CONTRACT, INSTEAD OF CALLING FOR THE SAME PREMIUM EACH YEAR, SHOULD CALL FOR THE GRADUALLY INCREASING NATURAL PREMIUM, THERE WOULD BE NO NEED OF RESERVES OR ACCUMULATED FUNDS. THE COMPANY AND ITS MEMBERS WOULD DO BUSINESS ON THE RULE OF 'PAY AS YOU GO.' THE POLICY-HOLDER WOULD GET YEARLY THE EQUIVALENT OF HIS MONEY PAID."

When a man insures his life, the commodity he buys is *protection* to his dependent ones. Let him apply the principles upon which it is bought and sold on the level-premium plan, to the buying and selling of some other commodity, and see how reasonable it looks.

He is 32 years of age, and has just insured his life for $10,000, under a level-premium of $241 per year. If the supposition is not too violent, we shall suppose the agent explained to him in detail the nature of his contract. He is captivated by the mathematical nicety and subtle refinement of the system, and longs for a LEVEL-GROCERY BILL.

He hastens to his grocer, a man who conducts his business in princely style, and of reputed wealth — which, however, consists in his having the good fortune to hold a few million dollars of other people's money in trust, the terms of which not be[illegible]d defined, left him master of the situation. He is delighted with the prospect of getting yet more trust funds to handle, and encourages his customer in his fancy. They agree that the LEVEL-GROCERY BILL shall be $241 per year while the customer lives; $60.60 per annum shall be the dealer's profit; the net cost of the groceries to be delivered the first year shall be $83.30; and the first deposit, to pay for groceries after thirty years, shall be $97.10. A maximum scale of cost of supplies to be delivered each year is agreed upon, allowing for a gradual increase in consumption as the customer's family increases in age and numbers, so that the maximum the thirty-first year shall be $180.60. Each year the difference between the cost of the goods, with the commission added, and $241, is to be deposited with the grocer — *to avoid an increasing grocery bill*,— and after thirty years, when the cost and commission may exceed $241 per annum, the difference is to be paid from these deposits, *to keep things level.* As a bait, the grocer assures his confiding customer that he can handle that money much better than the customer himself can, and that if it earns more than 4 per cent. interest, the excess, with the value of any undelivered goods, may possibly be returned to him as a DIVIDEND. No provision is made for the return of that over-payment, except in groceries, and when he no longer needs that commodity he, too, will find himself in a "trap." To complete the analogy, the grocer must agree to return the amount in trust at the death of his customer, provided it has not already been forfeited by some technical breach of contract.

The analogy is not a forced one, for there is no more reason for a man going into a "trap" to escape an increasing *insurance bill* than to escape an increasing *grocery bill.* What other commodity in the whole category of human wants would a sane man think of paying for from fifteen to thirty years in advance, even if he knew its cost to him would surely increase?

Then why so pay for protection? Why attempt what has resulted only in disappointment and loss to ninety of every hundred who have attempted it in the past?

PAY AS YOU GO, AND GET WHAT YOU PAY FOR. Pay for protection to your dependent ones the cost of each year by itself, and get that protection. Add the *reserves* thus saved to your own capital, or invest them where they will not be beyond your own control.

Don't confess inability to transact your own business to advantage, by creating a trust you have no power to revoke. Don't admit weakness by the oft-repeated confession that the reserve would not be saved if not deposited with the company, and beyond your reach. The fascination of seeing a bank account grow, and knowing it is at your command in case of emergency, is a much greater incentive to frugality and persistence of deposit than the dread of forfeiting that which you cannot reach, even in the direst extremity. Else, why do savings banks flourish, without the aid of a canvasser?

It has already been seen that the existence of the reserve, and the penalty of forfeiting it, in whole or in part, by discontinuance, does not secure persistence, and as Elizur Wright reasonably suggests:—

"The fact that under the ordinary form of policy the longer one stays in the company the more it costs him to get out, must have something to do in accounting for the immense outward scramble."

From the same high authority we learn that "three things are essential to the permanence and prosperity of the company:—

"(1) That the members shall enter in good health, and without inheritance of special disease;

"(2) That each shall contribute yearly in advance to the fund for the payment of death-losses during the year, in proportion to the chance, as measured by some mortality table, of the company's losing by his own death during the year;

"(3) That when the policy covers a term of years, the persistence of the annual advance payments shall be sufficiently secured.

"What is called co-operative life insurance generally fails, partially or wholly, for want of the second and third essentials."

The only necessity for the existence of the reserve urged by the most able defenders of the system, is that it furnishes this third essential; or, in other words, the forfeitures recompense the company for diminished vitality as a result of the retirement of healthy lives.

Before discussing this subject, it is due to our readers, in a few words, to make them better acquainted with the authority whose opinions we so freely quote.

Elizur Wright has made more of a study of this particular branch of the subject than any other living man. When Insurance Commissioner of Massachusetts, he placed on the statute books of that Commonwealth the first legislative en-

actment for protecting the rights of the retiring policy-holder in his reserve — the Non-Forfeiture Law of 1861, already mentioned. For many years he agitated for a more complete reform; and, though opposed by all the forces at the command of a wealthy oligarchy whose unjust revenues he assailed, he has lived to see the cause triumph and his views crystalized in the Massachusetts law of 1881.

"That law is the product of that master mind which has done so much, without reward, save the consciousness of a laudable desire to benefit the great mass of policy-holders and place the business of life insurance where it deserves to stand — the greatest humanitarian institution of the age — freed from the grasping avarice which has so long and successfully controlled it, and is now so manifestly endangering its safety. I refer to my friend, the Hon. Elizur Wright, the veteran Actuary of the times." — *E. D. Williams, Consulting Actuary.*

Among his opinions which ultimately swayed the mind of the Massachusetts legislature, we find:

"The absolute necessity for a certain forfeiture or surrender charge to secure the persistence of the payments, justifies neither an excessive charge, nor the inequity of making it too small on some policies and too large on others.

"The practice of the companies transcends the reasons for it, and rides rough-shod over the old Latin law maxim, *est modus in rebus* (everything has its limits.)

"If a company does not indulge in extravagance of expenses, *the reserve of the first year gives ample security for persistence.*"

This proposition he demonstrates by logic and by mathematics, proving that the forfeiture of that amount will be more effective in accomplishing its purpose than the forfeiture of the whole reserve, and will fully recompense the company for a possible diminished vitality as a result of the retirement of healthy lives.

How great is this bond? The average age of entry into 30 American companies is 35 years, making the average reserve at the end of the first year ***$9.82*** *on each* ***$1,000*** *insurance.*

THEN A RESERVE OF $10 ON EACH $1,000 INSURANCE IS A SUFFICIENT BOND TO PERSIST, AND COMPLETELY ANSWERS THE REQUIREMENT OF THE THIRD ESSENTIAL.

"*There is no reason,*" says Mr. Wright, "*why a life insurance association which insures without banking, should not be as permanent as any other, and better accommodate all those business men who wish to have all the capital they can for use in their own business.*"

We shall add more expert testimony to support the opinions of this high authority.

Sheppard Homans, the distinguished actuary of New York, says:

"As a person grows older, the risk of dying, or in other words, the *cost of insurance*, necessarily increases, and this cost must be paid for, in some shape or manner, under any and every system of life insurance." By the system of level-premiums, "the annual payments required are, for many years, largely in excess of the actual cost of the risk. These excessive payments constitute the reserves, which are, in fact, simply deposits, or payments in advance, for insurance promised to be furnished in the future, and ARE NOT ABSOLUTELY NECESSARY TO SECURE THE PROTECTION DESIRED. These vast accumulations, OCCASIONED SOLELY BY THE ARTIFICIAL SYSTEM OF LEVEL-PREMIUMS, have, in too many instances, been lost by the dishonesty or incompetency of those charged with their custody and investment.

"They offer fearful temptations to unscrupulous and designing men to get possession of a company in order to use or manipulate these trust funds for their own personal advantage. Moreover, if a policy holder should omit, by accident or necessity, to pay any stipulated premium when due, his reserve or accumulated deposits may, by the usual terms of the policy contract, be forfeited or confiscated, and the policy holder is entirely at the mercy of the company."

Mr. Homans, who has spent a whole life "within the veil," knows whereof he speaks. These "great trust funds confided to the Managers," unlike the trust funds of other banking institutions, far exceed any security offered for their honest and faithful administration, even by stock companies, whose capital soon becomes but a drop in the bucket when compared with these enormous accumulations of indebtedness. In view of this fact, and while the richest moneyed institutions of the age are crashing in ruins through the fallibility of human nature — its liability to err in judgment and to be overcome by great temptation — shall we point to the FOUR HUNDRED AND EIGHTY MILLIONS, not of wealth, but of trust funds, now controlled by the few men who manage American Life Insurance Companies, and cry "Behold a tower of strength!" This "tower of strength" has proved the ruin of every Level-Premium Life Insurance Company that has failed. The reserve, collected for the payment of insurance to be delivered "AFTER MANY YEARS," is in part squandered or applied to other uses. The Depart-

ment of Insurance discovers the fact, and, like a physician who kills his patient lest he die of the disease, it declares the company insolvent. Then comes the WRECKING and the SPOILS.

Of 250 such companies that have started business in America, but 48 are alive to-day. Those that failed during the ten years, 1873–83, alone, had collected over SEVENTY-SEVEN MILLIONS more than they returned to their too-confiding policy-holders. The irresistible logic of facts has demonstrated that the large reserve fund of Level-Premium Insurance is a source of *weakness*, which threatens the stability of the richest companies of to-day.

There is a fond delusion prevalent amongst policy-holders that the *reserve* is a *re-insurance* fund, upon which the risk would be transferred to a solvent company in case of disaster.

The following grim joke, perpetrated by the Receiver of a company whose memory is still green in the thousands of American homes it had plundered, forcibly illustrates the vanity of such hopes.

We quote from the *Savannah News*, December 6, 1883:

"The ways of bankrupt life insurance companies are devious and dark, and difficult to define. What becomes of the assets of the broken concerns, the most diligent enquiries of the disgusted policy-holders fail to discover. A well-known citizen of this city had a policy for $5,000 in the Knickerbocker Life Insurance Company, which gave up the ghost some time ago. He wrote to the Receiver to know what his policy was worth. The following is an extract from the reply he received:

Your claim is valued by the Receiver at		$1 70
But he deducts from his valuation —		
For your indebtedness on premium notes, ...	$0 00	
For your indebtedness on premium charges, ...	491 42	
Total deductions, ...		491 42
Leaving the net amount of your claim only		$0 00

It is on this last sum the dividend will be rated. It is not likely to exceed 20 per cent., or, say $0.00" ! !

A writer in the *International Review* estimates that, in the "transfers" of eight companies (1871–77) to the Universal, nearly twenty-six millions' worth of policies disappeared, and that in the Universal, seventy-four millions more finally disappeared within that period of seven years.

Hon. Oliver Pillsbury, *Insurance Commissioner of New Hampshire,* says:—

"No substantial reason has yet been adduced, why a person should not pay and renew insurance on his life annually,

as he does on his insurable property. Life insurance, conducted somewhat after the manner of annual fire insurance, would largely do away with the necessity of the heavy "reserve" accumulations, *already the subject of deep concern among thoughtful business men.* It is very desirable that some method should be devised which may easily be comprehended, and through which the masses may obtain reliable life insurance, *especially during the labor period, at less cost,* AND HAVE JUST WHAT THEY PAY FOR."

Hon. Stephen H. Rhodes, *Insurance Commissioner of Massachusetts,* says:—

"It is becoming more apparent every day that a radical change in the plans of life insurance is demanded . . . . What the public require and will have is a form of insurance adapted to their necessities. Level-premiums, extending beyond the producing age, and endowments burdened with enormous expenses, will not meet their wants. Of the various schemes or plans of insurance adapted to the wants of the masses, that of Mr. Wright and that of Mr. Sheppard Homans, known as '*Life Insurance without large Accumulations or Reserves*' are the most prominent at the present time."

Hon. J. M. Foster, *Ins. Commissioner of Pennsylvania,* says: "Insurance for a term of years, or from year to year, as adopted by several companies, is growing in popular favor, because it avoids the complications growing out of the whole-life contract, *and dispenses with large accumulations.*"

Hon. Philip L. Spooner, *Insurance Commissioner for Wisconsin,* speaking of the system of insurance by natural premiums, without reserves, says: "This plan of life insurance is one the want of which has long been felt as being within the comprehension of the ordinary mind. It might be well called the common sense system of life insurance, for, while the indemnity is as unquestioned as that of the old-time system, yet, unlike the latter, it is not so inextricably connected with fine-spun theories as to mystify the assured, if not the actuary himself."

William McCabe, Esq., F. I. A., Eng., *Managing Director North American Life,* says:

"Eminent actuaries, whose opinions have commanded universal respect, have of late years pointed out the necessity of employing some modification of the present plans, *which shall be free* (or largely so) *from the heavy burden of accumulations* for future benefit, which is cast on the shoulders of the present.

"There are thousands who want life insurance, and who desire that in case of their untimely deaths, its protecting mantle may be cast around those dependent upon them; and those who have not an abundant share of wealth, need some cheaper form, covering fully the necessities of the present, *without any unnecessary accumulation for future contingencies that may never occur.*"

We might quote the opinions of Lucius McAdam, James F. Burns, and other actuaries of eminence, who unite their testimony that a system of life insurance requiring payments to a mortuary fund in advance of deaths, by each member in proportion to his own risk of dying, and requiring a reasonable bond for persistent payments, is not only sound, but thoroughly adapted to the real wants of the people.

Considering that the reserve fund is not *wealth* but a *debt;* is not *strength* but *weakness;* that it does not in any sense guarantee the payment of a death claim, but threatens to defeat its payment by bankrupting the company when its mortuary fund might be in a healthy condition; that but few who contribute to that fund ever derive any benefit from it; and that thousands who most need protection are unable to buy it when heavy deposits are also demanded: the efforts of the Dominion Safety Fund Life Association to furnish that protection without the cumbrous, dangerous burden of heavy reserve, should enlist the sympathies of all friends of the people and enemies of arrogant monopoly.

Says a thoughtful observer, in *Harpers' Monthly Magazine*, "Never in history or mythology has such a rain of gold descended upon the heads of common men. The way in which they have misused it forms the strongest of comments upon the *danger to our community*, which thinks itself a free one, *from the over-mastering power of great-moneyed corporations.*"

The danger is not realized by the people of this Dominion, because here the system has not reached its fullest development. The largest Canadian company is a mere pigmy when placed beside a leading American rival—one of which has expended upon its New York office building alone a sum about equal to the entire reserve of our proudest company, and pays its president a salary of $37,500 per annum.

Here the public mind has not been shocked by disclosures of the bribery of legislatures and of government officials, and the numberless extravagances that have shaken public confidence in the institution in the neighboring republic, and driven the people from the Scylla of corrupting accumulations into the Charybdis of "The Assessment Delusion." While

we believe that the management of Canadian insurance has been more honest and less extravagant, we cannot forget that the system is the same, and we don't know what the future may develop. "The fault is not so much in the men as in the system. It leads into temptation. It would corrupt angels."

Let us learn the lesson the past so forcibly teaches, and not give preference to a system which, in its normal development, is fraught with danger to our free institutions.

VII.

PRINCIPLES OF THE SAFETY FUND SYSTEM.

The veil has been removed, the principles of the science of life-insurance have been made plain; the developments of past experience have in part been made known. We are now prepared to examine the principles upon which the system of the DOMINION SAFETY FUND LIFE ASSOCIATION is based, and intelligently decide whether they embody the essentials of permanence which that science demands, and the principles of equity and economy which past experience has developed.

COST OF INSURANCE.

First Principle.—The cost of insurance must be paid by the assured.

This principle is axiomatic, yet deserves some consideration.

Stock Companies have been organized for the purpose of selling life-insurance to the people; and just as dealers in other commodities make their profit by selling goods in advance of cost, so the Company dealing in life-insurance expects to make dividends upon its stock by collecting from the assured more than the cost of the insurance furnished and the expenses of transacting the business. But the ordinary merchant knows the cost of his wares when he fixes their price, while the Insurance Company must fix the selling price of the commodity in which it deals, and collect that from the assured, before death writes the invoice of its cost.

To those who have been led to reflect only upon the uncertainity of life, upon those unaccountable freaks by which death so often passes by his natural victims—the old, the diseased, the wounded, and the deformed—and strikes

down the healthy in all their powers of vigorous manhood, nature seems to obey no law but inconstancy, to furnish no data by which death's "invoice" could be pre-determined. Yet, amid all this uncertainty and inconstancy regarding death's dealings with the *individual* or the *few*, he does obey a wonderfully constant law in his dealings with the *many*. Thus, amongst 563,000 persons aged 36 he is *almost certain* to mark 5,227 as his own during a year; but in selecting his victims he may capriciously disregard all human notions of the fitness of things, and strike where least expected.

No phenomenon of nature is more remarkable than the constancy by which events depending on constant though unknown causes are always reproduced in the same order *when considered in large numbers*. "The ratio of male to female births furnishes a noted instance. If we consider only a small number of births, nothing can be more uncertain than the result; but taking a large number, the proportion of males to females is found to be almost *invariable*, and nearly as twenty-one to twenty. A similar constancy is remarked in the results in statistical enquiries of every kind. The number of crimes of the same species committed in a year; the ratio of the number of acquittals to the number of trials; of patients admitted to public hospitals; of railroad accidents, &c., all attest the constancy *of the results*." This constant approximation to fixed ratios, which is proved by all experience, in the recurrence of events of the same kind, enables us to determine the average result of a series of coming events, of whose cause we may be ignorant, with as much precision as if we had accurate and detailed knowledge of the causes which determine their occurrence. It is the application of this law that has raised life-insurance to the dignity of a science. As soon as the requisite data from past experience could be arranged, life-insurance was no longer to grovel in the darkness of mere conjecture, but could precalculate the cost of its risks at the several ages with mathematical precision.

For this purpose the results of a series of observations on 62,537 lives, assured by seventeen British offices, were arranged into the *Actuaries' Table of Mortality* in 1843, which table is still very generally in use. The American Experience Table was arranged by Mr. Sheppard Homans from the mortality experience of the Mutual Life of New York, with other available statistics; and, though it indicates a lower rate of mortality than the former table, it is better adapted to American business, and has long been the standard in New York and several other States. In 1874 a committee of

American Actuaries commenced arranging the data furnished by thirty American offices, and the result of their labors has recently been published. It is the consolidated experience of those offices from the issue of their first policy up to 1874, and comprises observations on 1,027,529 assured lives—the most extensive series of observations yet tabulated.

It is from the data furnished by the Mortality Table, and the assumption that nature will continue to obey her own laws, that the Company calculates the *invoice of cost of insurance which death will write for it in the future*, and by which the *price* is fixed in advance. If fickle fortune should turn her back upon the Company,—if the natural law upon which it relies should prove inconstant, and death-losses pour in upon the Company in excess of its calculations, the comparatively small capital stock could not long avert disaster. To make money, the Company must collect more than the cost of insurance; if it collects less, ruin is inevitable. The fact that disaster from this source has never yet overtaken a Company increases our confidence in the constancy of nature's law; but the other fact remains that the risk of the price charged proving adequate, if risk there be, really rests upon the assured. If it proves excessive, the Company reaps a rich reward at their expense,—if it proves inadequate, the assured are involved in the ruin. These facts long ago taught the insuring public of America that capital, as a guarantee of the permanence of a system of life insurance, is an expensive luxury, not worth its cost.

Actuary Willey but states a familiar fact when he says that "some of the oldest and largest Companies on this continent were started without a dollar of capital, and solely through the energy, popularity, and rectitude of their officers their assets are now numbered by tens of millions."

The absence of a large reserve does not render capital more necessary for the security of the insurance contract; for, if a Company have millions of reserves, and a policy-holder die whose contributions to that fund aggregate but fifty dollars, not a dollar of the reserve in excess of the fifty he himself had contributed can be taken to pay the claim occasioned by his death.

The safety of the system,—the security to the assured, lies not in the capital stock or in the reserve, but in the constancy of nature's laws, and the mathematical accuracy with which their future operation may be determined from past experience, which enable the Company to pre-calculate its death-losses and create a mortuary fund sufficient for their payment.

Second Principle.—The assured must enter in good health and without the inheritance of special disease.

The effect of medical selection upon the mortality experience of a company is very marked. It not only excludes from the ranks of the assured those of impaired health, but all who are pre-disposed to any special disease from constitutional or hereditary tendency, though at the time of examination they may be in good health.

Third Principle.—A Mortuary Fund for the payment of death losses must be created and maintained, and each must contribute to this fund in proportion to the risk of his own death creating a claim upon it.

The Mortuary Fund is made up of the individual payments as *cost of insurance*, a term with which the reader is familiar, and the first principle requires that the whole sum necessary to maintain this fund must be paid by the assured. This third principle does not refer to the *amount* but to the relative *proportions* in which members of the several ages shall contribute to the maintenance of the Mortuary Fund. It requires that *the contributions at the several ages shall be in proportion to the risk of death at such ages.* This principle has been shown to be a *vital* one; it is embodied in Elizur Wright's "*essentials to the permanence and prosperity of a company;*" and, though the defenders of assessment insurance have denied its soundness, and mystified themselves and, too often, the public, by vague discussions upon the effects of the "coming and going" of members, their "average age," and their "expectation of life," yet *it is the foundation stone of every sound system,*—the one element of perpetuity which has saved level-premium insurance from indiscriminate ruin.

The following

TABLE OF RATIOS

Expresses the relative risks of death in one year, at the several ages, as determined by the Actuaries' Table of Mortality:

Age.	*Ratio.*	*Age.*	*Ratio.*	*Age.*	*Ratio.*	*Age.*	*Ratio.*	*Age.*	*Ratio.*
21	70	29	80	37	96	45	118	53	184
22	71	30	82	38	98	46	124	54	196
23	72	31	84	39	100	47	130	55	209
24	73	32	86	40	102	48	137	56	223
25	74	33	88	41	104	49	145	57	238
26	75	34	90	42	106	50	154	58	254
27	76	35	92	43	108	51	163	59	272
28	78	36	94	44	113	52	173	60	292

Let it be clearly understood that the above table, of itself, gives no intimation of the *absolute* risk of death at any age (a subject yet to be examined), but only the *relative* risks when one age is compared with another. To illustrate: it does not intimate the risk of death at age 21, but it shows that the risk at that age, when compared with the risk at age 29, is as 70 is to 80; and when compared with the risk at age 39, is as 70 to 100. To express it differently: if of an equal number at the three ages, 70 die at age 21, 80 would be expected to die at age 29, and 100 at age 39.

In obedience to the demand of our third principle, when, and as often as, a member aged 21 pays 70c. to the Mortuary Fund, another then aged 29, should pay 80c., and another then aged 39, should pay $1.00.

Assessment societies, whose rates are uniform for all ages, or graded only by the age at entry, ignore these proportions; and, in their attempt to give insurance "at cost," they charge the young *more than the cost* of their risk, because the *old pay less than the cost of theirs.* In the earlier years of the life of the society, when this inequity is but slightly felt, the young are reconciled to the injustice by the delusive hope that when they have faithfully borne their self-imposed burden, paid the death-claims of their older associates, and have themselves become old — young men of philanthropic spirit will be found to ignore the fact that the burden of dependent old age has increased, and nobly come forward to bear their burdens as they did the burdens of the old who preceded them.

Prof. Seth C. Chandler, of Harvard College Observatory, evidently has studied Life Insurance as well as astronomy, for he forcibly states this whole argument in two short sentences: "There does not seem to be room for any diversity of intelligent opinion that in any association whose current death claims are to be met solely from current assessments, the amount of contributions from members of various ages *should be proportional to the actual risk of death.* Any plan of operation in which this is not accomplished, not only violates the plainest principles of equity, but cannot long subsist; as in practice, the over-assessed members in a society thus organized will before long discover the injustice, and retire, and new ones will refuse to enter."

As the delusion we would dispel is a common and a dangerous one, we shall give one more independent and unbiassed opinion. Prof. J. B. Wheeler, of West Point, says: "As to the propriety of making continuous assessments for death claims, as at the original age of entry, I am fully of

the opinion that equity and good judgment require the rate of assessment shall advance with the age of the person insured. As a man grows older the risk of his dying increases, and if he does not pay the increased cost due to this fact, some one else will have to do it for him. I agree with Prof. Bartlett in being ignorant of any law of vitality, or principle of equity, that would justify uniform rates without respect to age."

Fourth Principle.—(1) The payments to the Mortuary Fund should be made in advance, or before the claims arise for which they provide. (2) Their amount should be determined by the average requirements of past experience. (3) Any surplus arising from a temporary rate of mortality for the several ages below that average should remain in fund to provide for a future excessive mortality to restore the average.

This principle involves three essentials to permanence and prosperity, which, being inter-dependent, can be best examined together. They have always been observed in the main by level-premium insurance, but are always ignored by assessment plans. The latter usually attempt to do business with an empty treasury, to furnish insurance on credit, waiting till death writes the invoice of its actual cost before its price is collected.

Under such a system, a Policy giving a definite promise to pay a definite sum at death is impossible. As the payment of the "benefit" is contingent upon its collection after death occurs, the Certificate of Membership, which takes the place of a Policy, can only promise to make an assessment upon the living members and to pay the amount so collected, "not to exceed" a certain sum, to the beneficiary of the dead. If any refuse to pay, *the beneficiary must lose that amount, or the members who do pay must make up the loss, besides paying for their own insurance.* This plan is claimed to be necessary "to furnish life insurance at cost." Let us see!

A system can justly claim "to furnish life insurance at cost" only when its details are so adjusted that its ability, for all time, to furnish any member, of whatever age, and whether a new entrant or an old, one year's insurance for the normal cost of his risk for that year, can be mathematically demonstrated.

This proposition cannot be denied. A system that gives one man insurance at less than the normal cost of his risk and charges another more than the normal cost of his, or that charges all its members less than the normal cost of their risk this year and collects from all, including new entrants, more

than that normal cost some future year, cannot justly claim to give "insurance at cost." To justify this claim the doors of the society must always be open to new entrants, and when they have come in no burden must be imposed upon them but their own — they must be required to pay for no risk but that which they ask the society to assume for them, considering that they have come to stay through a series of years. Otherwise they certainly do not get their "insurance at cost."

The normal cost of risk at the several ages has already been written in the actual practice of American insurance, and that experience demonstrates that *for the same ages the actual cost during a few years after the examination is much less, and after a few years is much greater, than the normal.*

Let us examine the record, as furnished by the combined experience of thirty leading American companies, whose immense business is distributed over the whole continent of North America.

Of the 32,206 men who entered those Companies at age 39, *but five per thousand died within one year after their examination.* There were 40,089 entrants at age 32, and those who persisted attained *age 39 seven years after they were examined.* Of these nearly *eleven per thousand died at that age.* Thus, the rate of mortality *for the same age* more than doubled by an advance in the age of the Policy from one to seven years. Extending this investigation, keeping the age of observation constant, but varying the age at entry from 38 to 24, so that age 39 is reached one, two, three, &c., years after examination, we have fifteen groups of risks all at age 39, but each group one year farther removed from examiuation than the one preceding it. Combining the mortality experience for each of those years of insurance, from one to fifteen, the average is but *eight and a half per thousand.*

Thus, the actual cost during the *first* year of insurance was \$5, during the *seventh* year it was \$11, while the average at that age during fifteen years of insurance was but \$8.50 per \$1,000 risk.

A young society of 2,000 members, each assured for \$5,000, has entered upon the struggle for existence. It would win pre-eminence over its competitors, and loudly proclaims that it gives insurance at "actual cost." The first year the average cost is but \$5 per thousand of insurance, and the managers herald the fact throughout the land. An enlightened friend points to past experience, and warns them that because they did not collect an average of \$8.50 — the normal cost — they have placed a mortgage of \$35,000 on their future, which death will surely foreclose. They close their

ears to the warning, and blindly hope for an "exceptional experience." The next year they fairly sustain their reputation for *cheapness* and increase the amount of the mortgage. So year after year till the *normal cost is reached*, when—each paying that normal cost—no addition is made to the debt. The seventh year is reached, when the debt has in part matured. It must now collect from its old members and its new alike $8.50—the normal cost—and in addition $2.50 as an instalment on that mortgage, which was the price of a now exploded reputation for *cheapness*.

Those who lapse and those who die before their risk has reached its normal cost alone have gained by the system, persisting members lose the aggregate of those gains, and new entrants are burdened by a liability they did not create.

They are charged $11 for what should cost them but $8.50.

Is this life insurance at cost?

The difference between entering such a society in after years and one in which the normal cost had been paid, and the surplus accumulated for the discharge of the debt, is the difference between buying a house that is heavily mortgaged, and one of equal value for the same price whose title is clear.

Age 39 is selected as an illustration, but the same record shows that the same law applies equally to all ages. Is this a mere coincidence or the operation of a fixed law of nature?

"But," says an objector, "you reason as if all the members were of the same age, and all insured in the same year. Take a society composed of all ages, and a number entering and retiring each successive year, and the law will not operate."

This fallacy is almost regarded as an axiom by many defenders of assessment insurance—it is a basal principle in the system, and to explode it will be to shatter the structure that is reared upon it.

As already seen, taking any number of any age, their vitality diminishes rapidly for several years with the age of their policy—or as their examination grows more remote. The membership of the company is composed of a number at each of the several ages. Taking these age sets separately, the law is proved to operate: the contention is that when these sets are shuffled together into one society, without regard to age, in some mysterious way nature is cheated—she can't re-arrange them into age sets, and in the confusion her law is defeated! Again, the law will operate when applied to all the entrants of this year, taken as a set, and when ap-

plied to all the entrants of next year taken as a set, and so with the entrants of the third year, and of the fourth year, and of the fifth, and each successive year. But just shuffle up the different year sets into one society, and nature will again become confused — she can't re-arrange the sets, and her law will be defeated!

The statement of the fallacy is its own refutation.

It is true, that if I have a debt of $4,000 to pay, and some charitably disposed friend comes forward and pays half of it, my burden is reduced to $2,000; it is true that if the first year set, and the second year set, and the third, and fourth roll up a debt which the fifth year set and the sixth and the seventh help to pay, the burden is lightened to those who contracted the debt. But how of the fifth year set, and the sixth, and the seventh? They are paying the *actual cost of their own risk*, and besides, are helping the earlier entrants pay the debt on theirs, while they themselves are rolling up a mortgage for their own future! by charitably permitting their payments, *in excess of the actual cost of their risk in the earlier years of their insurance, to be applied to the payment of others' debts, instead of funding them to discharge their own debt to mortality, which will soon mature.* And this is "paying as you go?"

The effect of members retiring without having paid the normal cost of their risk while insured, has been seen to increase the burden upon the future, and by no process of reasoning can this element be shown to defeat the execution of nature's decree.

Lest some reader may still cling to this fallacy, we shall "shuffle" the ages together, and again appeal to experience.

Of the whole mass of lives, of all ages, insured in the thirty offices whose records we quote, *six per thousand died during the first year* of their insurance, *fourteen died during the twelfth year, while the average mortality during thirty-nine years was but ten per thousand.*

This record, from the field of actual experience, where "coming and going," "average age," "expectation of life," and every other element which the theories of assessment insurance recognize as regulating the equities of payments, have had their perfect action, comes into every office that is attempting to give "life insurance at cost" by collecting only the *accidental, instead of the normal cost* of their risks, and, like the hand on the wall of Belshazzar's palace, it writes the inevitable doom of their purpose, if not of the company itself.

The "vaulting ambition" of assessment systems to give life insurance *at cost*, "o'er leaps itself and falls on the other

side." The wording of the contract makes it debatable whether they give insurance at all; they ignore our third principle, and thus compel young men and the later entrants to pay more than the cost for their age because the old men and the earlier entrants pay less than the cost for theirs; they ignore the first requirement of our fourth principle, and thus compel persisting members to pay more than the cost of their risk because lapsed members refuse to pay the cost of theirs; they ignore the second and third requirements of our fourth principle, and thus compel new entrants to pay more than the normal cost of their risks because the earlier entrants paid less than the normal cost of theirs. And this is furnishing life insurance at cost!

That our fourth principle is not only sound but *essential to permanence and continued prosperity* is demonstrated — not by our reasoning — but by the inexorable reasoning of nature through the laws she has written in past experience.

We have stated that this principle has always been observed *in the main* by level-premium companies.

They invariably collect for the Mortuary Fund more than the normal cost of their risks, but do they always retain the natural surplus to meet *delayed* losses?

The first consideration of the management is to pay expenses on such a scale as shall fittingly maintain its dignity as an "old public functionary." The second is to supply its agents with as tempting bait, by way of dividends, as does its competitor across the way. There is a constant temptation, not always resisted by the most prudently managed companies, to appropriate to these purposes the natural surplus arising from the mass of their risks being recently examined, as well as that arising from charging more than the normal cost.

We have already seen that "the whole system of dividends is a vicious one;" and a system of insurance which would observe the lessons the past teaches will avoid, if possible, this source of danger to the company, and of disappointment to the assured.

In the following table, column A expresses, in even numbers, the annual cost usually collected for $1,000 insurance, at the several ages. These sums invariably produce a surplus, which, as has already been seen, is one of the sources of dividends.

No company dealing in life-insurance as a speculation could be expected to charge only the net cost as determined by past experience. Such naturally wish to fortify themselves

against fate by collecting more than normal cost for the mortuary fund and a margin for profit, besides expenses. But when the assured fully understand that the mortuary fund is their own and not the company's, that it is to be maintained only by their payments, that every dollar paid for that fund reaches its destination and remains there until it is needed to minister to the necessities of some widow whose husband had contributed to it in his life-time, the excuse for collecting more than the normal cost ceases to exist.

If that cost be twenty per cent. less than that usually collected, *the assured receives a dividend of twenty per cent. in advance.* Should a contingency ever arise that is unrecorded in the past experience of life-insurance in these latitudes, and more than the recorded normal cost, with the accumulated surplus, be needed for a time to maintain the mortuary fund in a healthy condition, he is in precisely the same position as if he were insured under the old dividend system, — his advance dividend would be reduced for a time to meet that contingency. That contingency is not so liable to arise as under the system that year after year gives the company the handling of large sums in excess of the normal cost, with power to withhold what it will every year, and to weaken the mortuary fund by diverting from it the natural surplus to provide for delayed mortality.

We must premise our investigation into the normal cost of insurance at the several ages by the remark that the business of this Association is confined to British North America, whose climate, soil, drainage and other conditions affecting the public health have made it noted for its salubrity. It is obvious that observations made in other climates, where the assured are exposed to less favorable conditions, must give a rate of mortality higher than Canadian experience will verify. Unfortunately, the volume of business done by the thirty American companies in Canada, though comparatively large, is not of itself sufficient to furnish a safe guide. The reports of our companies to the Insurance Department of Canada furnish us no available data. Those reports indicate an average annual death-rate amongst insured persons of about nine per thousand, but not knowing the number of risks at the several ages, we can make no use of that fact. It is not the average cost for all ages, but the actual normal cost for each separate age that we desire. If the assured in Canada were all aged 50, nine deaths per thousand would be a low rate of mortality, but if all were aged 40 it would be high. We must seek of the "Thirty Offices" for our data.

But shall we include the data furnished by their experience in the Southern as well as in the Northern States?

For the purpose of enabling companies to vary their rates according to the climatic conditions of the various sections of that vast country, and distribute even justice to all their members, the results of past experience in the different sections have been separately tabulated, and great diversity is exhibited.

Thus, of 100,000 men living in the four States whose climatic conditions are probably most like those of Canada, — Michigan, Wisconsin, Minnesota, and Nebraska, 977 deaths are noted, against 1,705 deaths of an equal number living in the ten Southern States, — North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, and Texas. The mortality of the same number living in the New England States and New York was 1,053; in New Jersey and Pennsylvania, 1,071; and in Ohio, Indiana, Illinois, Iowa, and Kansas, 1,045.

This experience demands that in seeking the normal cost for Canada the experience of the Southern States be rejected.

The observations in British America alone are upon a volume of business equivalent, in round numbers, to an insurance on 5,000 lives of $1,000 each, for twenty years, and the normal cost which that experience has written for the several ages is but 67 per cent. of the cost uusually collected for the same ages.

This cost, for the purpose of comparison, is tabulated in column B.

Extending our investigation beyond Canada to the adjoining States and Territories — Maine, New Hampshire, Vermont, Michigan, Wisconsin, Minnesota, Dakota, Montana, Idaho and Washington, we have a volume of business equivalent, in round numbers, to an insurance on 38,000 lives, each of $1,000, for twenty-five years; and the normal cost which that experience has written for the several ages is but 76 per cent. of the cost usually collected for the same ages. This cost, for the purpose of comparison, is tabulated in column C.

Again extending our investigation — to New York, Massachusetts, Connecticut, Rhode Island, Pennsylvania, West Virginia New Jersey, Delaware, Ohio, Nebraska, Illinois, Iowa, Wyoming, Oregon, Kansas, we have a volume of business equivalent, in round numbers, to an insurance on 85,000 lives of $1,000 each, for fifty years, and the normal cost which that experience has written for the several ages is but 81½ per cent. of the cost usually collected for the same

ages. No account is here made for interest accumulation, and we have seen that by paying the normal cost year by year a surplus to meet delayed mortality is inevitable, making this element an important factor in the calculation. Assuming that the interest on this natural surplus will be equivalent to the interest on the whole fund for six months at 4 per cent., *eighty per cent. of the cost usually collected for the several ages will maintain the Mortuary Fund in a healthy condition, allowing for an average mortality at the several ages equal to that experienced by the "Thirty American Companies" from the issue of their first policy up to 1874, in British America and twenty-five Northern States and Territories.* The cost of insurance written in this vast experience is tabulated in column D, and this is the normal cost of risks which prudence demands shall be regularly collected, without reference to the accidental mortality of any particular year, to maintain the Mortuary Fund — to give permanence to the system and security to the assured, and to insure the ability of the system for all time to furnish all its members, whether young men or old, whether recent entrants or entrants of the earlier years, all the insurance they desire at the normal cost for their respective ages.

It will be observed that the table of age ratios by which the requirement of our third principle is secured, has been recognized in these columns. Giving those ratios a money value in the denomination *cents*, the cost for each age by column D is eight times the ratio for such age.

It may be objected that we have gone too far from home for our data, and have placed the normal cost too high.

Our reply is, that in the absence of a larger mass of experience in Canada we were driven to the experience of our neighbors, and unless we are willing to sacrifice mathematical certainty for the insecurity of mere conjecture, a lower estimate is impossible.

What if we should make the sacrifice and reduce the cost an average of a dollar per thousand ? — that saving would be a poor return for the resulting uncertainty and insecurity of the insurance. The over-payments, if such there be, are not at the disposal of the company, to divert, if it will, from the mortuary fund, but remain there as a permanent security to all the insured.

Though no provision is made in the calculation for dividends from this fund, if experience demonstrates that a surplus is accumulating in excess of what prudence demands, it will then be reduced by equitable dividends to those whose

payments created that excess, but no agent is expected to hold out any such possible dividends as an inducement to business. Those rates allow for a *dividend in advance* of twenty per cent. on the usual cost, and this is the only dividend to expect.

COST OF INSURANCE.

$1,000.

Thirty Offices' Experience.

Age.	A Cost from which Level-Premiums are usually calculated.	B Actual Cost in Canada.	C Actual Cost in Canada and Ten Adjacent States and Territories.	D Actual Cost in Canada and Twenty-five Northern States and Territories.	Age.	Age.	A Cost from which Level-Premiums are usually calculated.	B Actual Cost in Canada.	C Actual Cost in Canada and Ten Adjacent States and Territories.	D Actual Cost in Canada and Twenty-five Northern States and Territories.	Age.
	$	$	$	$			$	$	$	$	
21	7 00	4 69	5 32	5 60	21	41	10 40	6 97	7 90	8 32	41
22	7 10	4 76	5 40	5 68	22	42	10 60	7 10	8 06	8 48	42
23	7 20	4 82	5 46	5 76	23	43	10 80	7 24	8 21	8 64	43
24	7 30	4 89	5 54	5 84	24	44	11 30	7 57	8 59	9 04	44
25	7 40	4 96	5 62	5 92	25	45	11 80	7 91	8 97	9 44	45
26	7 50	5 02	5 70	6 00	26	46	12 40	8 31	9 42	9 92	46
27	7 60	5 09	5 78	6 08	27	47	13 00	8 71	9 88	10 40	47
28	7 80	5 23	5 93	6 24	28	48	13 70	9 18	10 41	10 96	48
29	8 00	5 36	6 08	6 40	29	49	14 50	9 72	11 02	11 60	49
30	8 20	5 49	6 23	6 56	30	50	15 40	10 32	11 70	12 32	50
31	8 40	5 63	6 38	6 72	31	51	16 30	10 92	12 39	13 04	51
32	8 60	5 76	6 54	6 88	32	52	17 30	11 59	13 15	13 84	52
33	8 80	5 90	6 69	7 04	33	53	18 40	12 53	13 98	14 72	53
34	9 00	6 03	6 84	7 20	34	54	19 60	13 13	14 90	15 68	54
35	9 20	6 16	6 99	7 36	35	55	20 90	14 00	15 88	16 72	55
36	9 40	6 30	7 14	7 52	36	56	22 30	14 94	16 95	17 84	56
37	9 60	6 43	7 30	7 68	37	57	23 80	15 95	18 09	19 04	57
38	9 80	6 57	7 45	7 84	38	58	25 40	17 02	19 30	20 32	58
39	10 00	6 70	7 60	8 00	39	59	27 20	18 22	20 67	21 76	59
40	10 20	6 83	7 75	8 16	40	60	29 20	19 56	22 19	23 36	60

RESERVE — THE SAFETY FUND.

Fifth Principle. — Besides the natural surplus in the mortuary fund, there should be a reasonable "reserve," to secure persistence of payment as a primary object, and to reduce the advancing cost to persisting members as a secondary object.

This principle contains Elizur Wright's third "essential to the permanence and prosperity of a company" already noted.

We have seen that a reserve of ten dollars on each thousand of risk is sufficient to secure its primary object; wherefore each policy-holder is required to deposit that amount as a bond to continue his payments. To secure the two-fold object of this principle, all who complete this deposit in any year constitute a separate class for that year; and, as regards the management of the fund created by their deposits — called their SAFETY FUND — they are independent of all other members, each of whom belongs to the class of the year in which he completed his own deposit.

For five years after the formation of any class the interest of their Safety Fund accumulates, and thereafter it is apportioned regularly to the credit of surviving and persisting members. When the amount of insurance in force on the lives of members of any class has been so reduced by death and discontinuance that it does not exceed the amount of Safety Fund for that class, THE SURVIVING AND PERSISTING MEMBERS ARE PAID THE FULL FACE VALUE OF THEIR POLICIES, AS AN ENDOWMENT.

While the management of this fund is purely Tontine, it is not open to the objections rightfully urged against Tontine systems of investment insurance. The forfeiture is not *required for the sake of profit to persisting members,* but is necessary for the stability of the system; and, being small in amount, does not involve the hardship attendant upon ordinary Tontine forfeitures.

The dividends resulting are not made from moneys first collected from the assured for the purpose of afterward returning a part of the over-payments, but from the interest earnings of money deposited for another and a necesary purpose; and when the fund itself has accomplished its mission, the principal — no longer necessary to secure the persistence of those who deposited it — is distributed to those who, having faithfully discharged the obligations of membership for a series of years, have made themselves its owners.

Instead of attempting to secure persistence only by the pains of a forfeiture which grows heavier as the years pass,

we add to the penalty of a small forfeiture the hope of this rich reward.

How far the naturally advancing cost of insurance will be reduced by the dividends of interest is dependent on the actual experience of each Safety Fund Class.

The fact that under every form of insurance there is a large volume of "outgoing," has already been shown, and we have quoted the assertion of James F. Burns, Consulting Actuary, that "the experience of the best life companies on this Continent shows that not more than ten out of every one hundred insurers keep their policies in force for twenty years." With this experience, and adding the deaths during that period, it will be seen that each persisting member's original contribution of ten dollars will then have multiplied many times, and the regular dividend of interest must be a considerable part of the natural premium. We have the data by which a mathematically accurate calculation of the amount of such dividends and of the period when the endowment would mature might be made, on the basis of past experience. But that experience was under an entirely different system of insurance, and it remains to be demonstrated by our own experience whether the rate of lapses under a system where nothing is concealed, where the insurance is furnished at cost, and where there is no heavy penalty for forfeiture, will be greater or less than under the old system.

Hence we hesitate to raise expectation by calculations from the experience of other systems, which our own experience may disappoint. We give an obligation to apportion the interest amongst persisting members of each class, according to the age ratios by which their cost of insurance is paid, and it remains for experience to develop the number to receive those dividends, and consequently their amount for each.

Sixth Principle.—No larger "reserve" than will secure its primary object should be collected, and all payments to this fund should annually be placed beyond the control of the management.

The first demand of this principle has been fully discussed. It may be asked why we advocate a possible accumulation in the mortuary fund and object to the accumulations of high reserve.

Our answer is, that the one is *natural, essential* and *highly expedient,* while the other is *artificial, non-essential,* and *wholly inexpedient;* and this has been fully demonstrated.

The second demand is emphasized by the ruin which has overtaken so many level-premium companies through the dishonesty and incompetency displayed in the management of the "reserve."

The contributions to this fund, unlike those to the mortuary fund, which are being constantly distributed, are liable to indefinite accumulation. No amount of security offered in advance by an aggressive management, for the honest and prudent discharge of a trust which is liable to become so great in the future, could be regarded as certainly adequate. We may have absolute confidence in the wisdom and integrity of the management of to-day, and be willing to trust it without adequate, or any, security; but who will be the managers, and what their character, before the moneys we contribute to reserve have accomplished their purpose and found their way to their rightful owners?

If the second demand of this principle had been observed in the past, even if the first had been ignored, hosts of companies which now fill dishonored graves would be healthy and prosperous to-day.

The policy issued by the DOMINION SAFETY FUND LIFE ASSOCIATION gives effect to this principle by an obligation to deposit the entire Safety Fund of each year's class in the Dominion Treasury, subject to the provisions of the Dominion Insurance Act, requiring it to remain on deposit until the Governor General in Council shall determine that the conditions under which it was contributed, and which are stated in that policy, have been fully observed by the company.

THE MANAGEMENT.

Seventh Principle. — The management should furnish security to the assured in proportion to the amount of trust funds they control.

This principle is a demand of simple business prudence. It has always been applied to banks and other financial institutions seeking public confidence, excepting only life-insurance.

When it was discovered that capital was not necessary for the successful operation of life insurance when prudently managed, men of ability and character constituted themselves managers, and without pretending to give any security for the contracts they wrote save the funds first collected from the assured for that purpose, they succeeded in inspiring public confidence in the soundness of the system and in their own integrity of purpose; and now, when the management

is in other and too often less faithful hands, the accumulations of trust funds aggregate many millons.

The faithful and efficient discharge of such enormous trusts demands a degree of wisdom and integrity seldom vouchsafed to men, yet the only security offered those whose payments constitute the trust funds is the accidental integrity of the men whose fortune it is to be the managers of to-day.

These scatter throughout the land, and hang upon the walls of every public office, illuminated statements of the amount of their trust funds, in columns and lines of Arabic characters expressing values of which the finite mind can scarcely conceive. The public eye is dazzled and men point confidently to the emblazoned tablets crying, "Here is wealth! here is security! When I insure it shall be in a company that has fifty or a hundred millions of dollars to back up its contracts!"

If the porter whom I hire for twenty-five cents to carry my valise containing $10,000 can be said to be wealthy on account of the trust I repose in him, so can these companies be said to be wealthy on account of the enormous trusts they control; if the porter is more worthy of credit by his tailor on account of the satchel he carries, so do these companies better deserve to have the interests of dependent women and helpless children committed to their care on account of those accumulations of trust funds; but if the porter is more liable to be missing when the satchel is wanted, by knowing the rich treasure is in his power, so those companies are more liable to be known only in story when the widows and orphans of the future want for bread, by knowing that those trusts were created without proper restrictions and without security; and, lastly, if the porter *may be honest*, pay his tailor, and faithfully discharge his trust, so *may* the managers of those companies be honest and faithfully discharge their every obligation.

Though capital is not necessary for the successful operation of a sound system of insurance when efficiently and honestly managed, it does seem reasonable that it should be given as a guarantee of such management. It is not the risks incident to the system that have strewn the wrecks of life insurance companies all along the shores of the past, but the risks incident to the management of that system; and no managers should be trusted, no matter what their reputation or integrity of purpose, who are not willing to expose their capital to this risk, and thus relieve their system of the only danger threatening its safety.

It has been seen that the Safety Fund is placed beyond the control of the management at the end of each year, hence no security beyond one year's accumulation is required on its account.

The payments to the mortuary fund are only the normal costs of insurance, and a large accumulation there is possible only by an exceptional experience.

Considering these facts, the company's capital of one hundred and twenty thousand dollars is abundant security for a faithful discharge of the trusts reposed.

"But," says an objector, "that capital is not all paid up, and is not all security!"

What would you think of a law requiring a county treasurer, instead of giving a bond for his honesty, maturing only in case of defalcation, to deposit his security in cash in the county vaults? It would be under his own control, and should he abscond with the county funds he would carry his security with him!!

The banks, unlike insurance companies, require a fully paid up capital for the transaction of their business; but here the law protects the public against the embezzlement of deposits and paid-up capital as well, by creating a second liability on the part of every stockholder; and this un-paid capital is the real security for honest administration. The paid-up capital of this Association is in the Dominion Treasury as security, under the provisions of Insurance Legislation, and thus beyond the control of the managers, while the un-paid capital is in the estates of the stockholders, and there beyond the risk of embezzlement. Thus is every dollar of the capital the most effective security.

We have now the insurance purely mutual, while the risks of management are assumed by a stock company as trustee, thus relieving mutual insurance of the only danger which threatens the system, and guarding it from the only evils that have overtaken it in the past.

Eighth Principle.—The management should be limited in the amount of moneys contributed by the assured that it shall consume in expenses.

Assessment insurance has almost invariably recognized this principle, and thereby removed from its contracts the source of many of the evils which have attended the practice of level-premium insurance.

If there is to be a perfect understanding between the Association and each member, the latter must know that every dollar he pays for the mortuary fund reaches its destination and remains there until it is required to discharge a claim upon that fund; that every dollar he pays to the Safety Fund reaches the Dominion Treasury — there to remain until its mission is accomplished.

This complete understanding would be impossible if the management had the right to dip into either fund as its necessities or caprice might dictate.

It calls for extraordinary confidence in the integrity and sense of justice of another to confide in him the management of one's estate, granting him the prerogative of deciding, without the right of appeal, how much he shall regard as his own, and for how much he shall render an account.

This company, as trustee of the assured, makes a bargain in advance to conduct the business for three dollars per year for each thousand dollars insurance, after the initial premium to cover initial expenses, has been paid.

This provision makes it possible for the managers to specify, in each notice of premium due, to what purposes the payment is to be applied, and the amount for each, instead of lumping all together, leaving it for the company to apportion as it will.

Ninth Principle. — The management should comply with the provisions of the Dominion Insurance Act, requiring a Dominion deposit and official inspection.

This principle has been complied with by the deposit of $50,000 with the Receiver General of Canada, and that deposit must be increased from time to time as the company's liability to the assured on account of the Safety Fund increases. The insurance legislation of Canada is intended in some measure to protect the insured from imposition, and if they encourage companies to violate the law by patronizing such as do not comply with its provisions — make their deposit and obtain a license — they ignore the paternal protection of their own government, and should expect to suffer loss.

Tenth Principle. — The assured should have an effective voice in the management, and should regularly be informed of the condition of their business.

Effect is given to this principle by the constitution of the annual meeting, at which each policy-holder has a vote, either in person or by proxy, for each thousand dollars insur-

ance. At each meeting a detailed report of the condition of the business is regularly made, and a printed copy is sent to the address of each member. The meeting annually elects seven directors — three by the votes of members alone, three by the votes of stockholders alone, while both unite to elect the seventh.

Auditors are likewise elected, whose business it is to audit the accounts of the Association, and make their report at the next annual meeting

In conclusion, the Safety Fund system is a development, and not an invention. Its ten principles are but verbal formulæ of the teachings of the past, and to that we have appealed for their justification. As the record is written in the experience of level-premium and of assessment insurance, we have been compelled to examine the principles and practice of those systems, not in malice, but for the sole purpose of learning the lessons their experience should teach. We have found that to admire and that to condemn in both; and, casting aside the spurious, we have framed the genuine into a system whose every detail is adjusted to act in perfect harmony with nature's laws. It "occupies the true middle ground between the two extremes of expensive insurance by level-premiums, and the uncertain or indefinite insurance by post-mortem assessments," avoiding, alike, the dangers and defects of the old reserve plan, and the weakness and uncertainty of assessment systems. It gives effect to the motto, "Pay as you go, and get what you pay for," as no other system does.

In solving the vexed problem of "life insurance at cost," we have used only the recognized mathematics of life insurance. If the reader is not satisfied with the solution the fault is in the mathematician — not in the mathematics; if he is not convinced of the soundness of our principles, the fault is with the writer who has attempted their vindication, — not in those principles, which are as enduring as the laws of nature that gave them birth. Following so implicitly the teachings of the past, our system cannot but be as enduring as time itself, capable of fulfilling its one mission — to provide sustenance to the widow, and home comforts, with the means of education to fatherless children — through all the years to come.

A BIRD'S-EYE VIEW.

THE THREE SYSTEMS COMPARED.

LEVEL-PREMIUM COMPANIES.	*THE DOMINION SAFETY FUND LIFE ASSOCIATION.*	*ASSESSMENT COMPANIES.*
Full Dominion Deposits, Dominion License, and Official Inspection.	**Full Dominion Deposits, Dominion License, and Official Inspection.**	No Dominion Deposits, No License and No Official Inspection.
A Guarantee Policy.	**A Guarantee Policy.**	An Indefinite Certificate of Membership.
No Endowments on whole Life Policies.	**The Last whole Life Policy in force of every One Hundred becomes a full Endowment Policy, without extra Cost.**	No Endowment on any Certificates.
The Management is by a Stock Company; or by self-constituted Officers, without security.	**The Management is by a Stock Company.**	The Management is by self-constituted Officers, without security.
Expenses are Unlimited.	**Expenses are Limited.**	**Expenses are Limited.**
Insurance is purely Mutual; or Mixed with small capital, upon which the Assured pay large dividends, besides expense of Management.	**Insurance is purely Mutual—Company as trustee receives only a fixed Commission as Expense of Management.**	**Insurance is purely Mutual—No** Stock Company.

Insurance is purely Mutual; or Mixed with small capital, upon which the Assured pay large dividends, besides expense of Management.	Insurance is purely Mutual — Company as trustee receives only a fixed Commission as Expense of Management.	Insurance is purely Mutual — No Stock Company.
Insurance is not furnished on Credit.	Insurance is not furnished on Credit.	Benefit is furnished on Credit with an empty Treasury. Paying Members must make up bad debts, or the Beneficiaries lose their amount.
Cost of Risk increasing with age of Assured is recognized, and each pays that Advancing Cost for himself.	Cost of Risk increasing with age of Assured is recognized, and each pays that Advancing Cost for himself.	Cost of Risk increasing with age of members is ignored, and each expects some one else to pay that advance for him.
Cost of Risk, at a given age, increasing with age of Policy is recognized, and each policy-holder pays the Normal Cost of his risk without reference to accidental death-rate.	Cost of Risk, at a given age, increasing as Examination grows more remote is recognized; and each policy-holder pays the Normal Cost of his risk, without reference to accidental death-rate, — the surplus from a death-rate below the average remaining in fund to meet an excessive mortality, to restore the average.	Cost of Risk, at a given age, increasing with age of Certificate is ignored. The accidental Cost only is collected, and in after years new entrants will have to help pay the debt to delayed Mortality.
Premiums are burdened with heavy Reserves, intended to pay for Insurance not to be delivered till after many years, when the Company may not be alive to furnish it, or the assured to receive it, and when he may not need it if he be alive.	Each Policy-holder makes a single deposit to Reserve of ten dollars per thousand Insurance, to help the few who may need insurance after many years, pay its then increased cost.	No Reserves.
Reserves are controlled by the Managers, and exposed to risk of loss by bad investments, peculation, and fraud.	Reserves are in the Dominion Treasury, and beyond the possibility of Loss.	No Reserves.

VIII.

COMPARING RESULTS.

The soundness of the Safety Fund system has been established by reconciling its principles with the demands of insurance science, and by the testimony of the highest insurance authorities on the American continent. That our mortuary premiums, as given in column "D" of the table on page 40, are adequate is shown by the consolidated experience of thirty American offices in Canada and twenty-five Northern States and Territories; and when we consider that that experience included female and hazardous risks, for which we charge extra premiums, and that the salubrity of Canada is notoriously greater than where the great mass of that experience accumulated, the adequacy of those premiums is placed beyond question.

Therefore, we can compare results with the best level-premium company, without *assuming* that our system is equally sound, or that our premiums are adequate—*both have been demonstrated.*

It may be that some reader, admitting the high reserve to be artificial and non-essential, is not yet convinced that it is inexpedient.

We ask such to carefully read what follows and study the calculations by which we compare results.

The Canada Life is the oldest and largest Canadian level-premium company, and has latterly been winning a reputation over its competitors by the comparative richness of its dividends. It furnishes us the means for this comparison by advertising the dividends awarded the holder of policy No. 34, issued in 1848, which we may fairly assume is as good a showing as that Company can make. Having received his dividends by "bonus additions" to his policy, he has paid thirty-seven *uniform* premiums.

By "bonus additions" is meant that the dividends, instead of being paid in cash, are applied to the purchase of fully paid-up insurance, which is added to the policy and payable therewith in case of death. The Company says: "*It cannot be too plainly stated that each mode is the equivalent of the other.*" Accordingly no exception can be taken to our selection of this mode for a comparison of results.

The next question to settle is the value of money. For the purpose of a fair comparison we must make a Safety

Fund Policy contemporaneous with No. 34, whose dividends were made upon the earnings of interest by PAST rates. What have they been? In 1883 the average interest earnings in all the Canadian companies *exceeded* six and a half per cent. — so says Prof. Cherriman in his report to Parliament.

Money has not increased in value: it has depreciated. It is a well known fact that much higher rates have prevailed in the past — the conscience of the capitalist being practically the limit. Many men having large sums locked up in life insurance have paid a higher rate on money employed as capital in their business; and every town and village throughout the country has its "prominent citizen" who has accumulated wealth by the magic of compound interest at the higher rates. Giving the Company the benefit of the excess, we shall select six and a half per cent. — a rate *lower* than the average for 1883.

When in the future the company furnishes us its results worked out by a lower rate of interest, we shall make another calculation and see where we stand.

The holder of Policy No. 34 must have been a young man in 1848. As his age, and the amount insured, can make no proportional difference in the results, according to the company's method of awarding dividends, we shall assume he was twenty-five years of age and insured for $5,000, the premium on which in that company is $95 per annum.

Let us suppose that every year when he paid $95 to that company, he laid aside another $95 for $5,000 insurance on the Safety Fund system; paid from it the natural premium by column "D," page 40, (adding the initial premium the first year, and the stipulated expenses every year); and invested the balance where it was not beyond his own control. The savings have accumulated, and had he died in any year, their then amount would have been realized to his estate in addition to the $5,000 insurance upon the Safety Fund Policy. Therefore, **the accumulated savings out of the $95 per year, after paying the natural premiums, are equivalent, in case of death, to "Bonus Additions" to the Safety Fund Policy.**

As we have no data from which to determine the amount of "Bonus Additions" to Policy No. 34 during the first seventeen years of its life, we have taken up the results at the end of that time, and, in the following table, they are compared during the last twenty years.

Reserve System *vs.* Safety Fund System.

WHOLE LIFE POLICIES. ISSUED A. D. 1848. AGE AT ENTRY, 25.

$5,000 ***Insurance by Level-Premium of $95 per annum, with profits by " Bonus Additions,"***

VS.

$5,000 ***Insurance by Natural Premiums, with Savings from $95 per annum Invested by Insured.***

YEAR OF COMPARISON. A.D.	A Amount of Original Insurance Payable under each Policy in case of Death. $	B " Bonus Additions" to Canada Life's Policy. Payable at Death with Column "A," according to actual results under its Policy, No. 34, issued in 1848. $	C " Bonus Additions" to Safety Fund Policy, payable at Death with Column "A," being the accumulated balances of $95 per annum, after paying the Natural Premiums. $	D Total Amount Realized at Death, under Canada Life's Policy, for the $95 per annum paid it as premiums, being sum of Columns "A" and "B." $	E Total Amount Realized at Death under Safety Fund Policy, with Savings from $95 per annum Invested, being the sum of Columns "A" and "C." $	F Excess of Amount Realized at Death by Safety Fund Policy, with Savings Invested, being the difference between Columns "D" and "E." $	AGE OF POLICIES. Yrs
1865	5,000	1,748 35	1,527 36	6,748 35	6,527 36	— 220 99	18
1866	5,000	1,748 35	1,666 68	6,748 35	6,666 68	— 81 67	19
1867	5,000	1,748 35	1,814 21	6,748 35	6,814 21	65 86	20
1868	5,000	1,748 35	1,969 20	6,748 35	6,969 20	220 85	21
1869	5,000	1,748 35	2,132 13	6,748 35	7,132 13	383 78	22
1870	5,000	2,373 35	2,303 09	7,373 35	7,303 09	— 70 26	23
1871	5,000	2,373 35	2,482 61	7,373 35	7,482 61	109 26	24
1872	5,000	2,373 35	2,670 82	7,373 35	7,670 82	297 47	25
1873	5,000	2,373 35	2,867 85	7,373 35	7,867 85	494 50	26
1874	5,000	2,373 35	3,073 86	7,373 35	8,073 86	700 51	27
1875	5,000	2,998 35	3,289 42	7,998 35	8,289 42	291 07	28
1876	5,000	2,998 35	3,514 73	7,998 35	8,514 73	516 38	29
1877	5,000	2,998 35	3,750 00	7,998 35	8,750 00	751 10	30
1878	5,000	2,998 35	3,995 45	7,998 35	8,995 45	997 10	31
1879	5,000	2,998 35	4,251 32	7,998 35	9,251 32	1,252 97	32
1880	5,000	3,623 35	4,517 86	8,623 35	9,517 86	894 51	33
1881	5,000	3,623 35	4,795 33	8,623 35	9,795 33	1,171 98	34
1882	5,000	3,623 35	5,084 02	8,623 35	10,084 02	1,460 67	35
1883	5,000	3,623 35	5,383 81	8,623 35	10,383 81	1,760 46	36
1884	5,000	3,623 35	5,694 57	8,623 35	10,694 57	2,071 22	37
				Average, ...		653.34	

Rich as were the dividends under Policy No. 34, the assured has enjoyed, during the years of comparison, an average of **$653.34** per annum — over 13 per cent. of original policy — more insurance for the same expenditure under the *Safety Fund System* with savings invested.

But the table tells only half the story. The assured is now sixty-one years of age. The purpose of his insurance is accomplished. His family are no longer dependent, and perchance he needs his accumulation to prevent becoming dependent himself. For $95 per annnm he has had assurance under the **Safety Fund System, with investment of savings, increasing from $5,000 to $10,694.57,** and now he has his **Policy in force,** which he may surrender or not as he chooses, and **$5,694.57 in cash to use as he will.** For $95 per annum he has had assurance under the *Level-Premium System increasing from* $5,000 *to* $8,623.35, and now he has **only a policy,** the terms of which make no just provision for his ceasing to pay premiums and withdrawing his accumulations.

We shall suppose the company *to be liberal*, and give him as a surrender value seventy-five per cent. of his reserve on *original policy and bonus additions.* (Many popular companies give but from twenty-five to fifty per cent.)

On this basis the company would give him, on surrender, **$3,255.60, against a cash accumulation for the other $95 per annum of $5,694.57 — a cash difference in favor of the Safety Fund System of insurance, with investment of savings,** of **$2,438.97 — an advantage of over 75 per cent.**

Is the high Reserve expedient?

Even should the company do what **none pretends to do — give the full reserve value of this policy and "bonus additions" in cash; still the policy-holder would receive $1,353.77 less than his cash in hand resulting from the same annual expenditure on account of his Safety Fund Policy, where he did his own banking.** — (Am. Ex. Table, 4½ per cent).

Is it expedient to waste even $1,350 that, in the future, may be saved by insuring in the Dominion Safety Fund Life Association for protection, and leaving banking to the banks?

We shall now ask the reader to go with us beyond the domain of definite calculation, but not beyond that of reasonable enquiry, to examine the feature of the Safety Fund

System omitted from the above comparison of results — the Safety Fund itself.

The dividends on the Reserve System are included in the foregoing comparison, as we had the data furnished by actual results to determine their amounts; *but the dividends from the Safety Fund were not included*, as their amount is to be determined by experience yet in our future.

The policy-holder paid from the $95 per annum the natural cost of each year's insurance, as that insurance was delivered, and invested the savings. Though that cost increased considerably in the thirty-seven years, *the results in amount of insurance during those years, and in the amount of cash realized at their close, is shown to overwhelm the corresponding results under the same expenditure in level-premium insurance.*

Instead of burdening the earlier years of every policy-holder to pay for insurance to be delivered only in the *distant future when it may not be needed*, the Safety Fund system requires all to make a single deposit of ten dollars for each thousand of their insurance to help the *few who may then need protection pay its then increased cost.*

The principles regulating the management of this fund have been explained; and, to understand its effect upon our comparison, we shall suppose 1,000 men, including the holder of No. 34, all insured for the same amount, formed the Safety Fund class of 1848.

The principal of their Safety Fund is $50,000, which amounts at end of five years to $68,500, and thereafter over $4,000 per annum would be apportioned each year to the credit of persisting members of the class — to reduce the naturally advancing cost of their insurance.

When their numbers are reduced to one hundred, which by level-premium experience would be inside of twenty years, **the dividend to each would exceed $40;** when reduced to fifty **the dividend to each would exceed $80;** and when reduced to twenty-five **the dividend to each would exceed $160.** If the class fund is composed of deposits on but one million instead of five million of risks, the amount of interest would be but $800; but the policy-holder in question, having five thousand of insurance, would receive five-hundredths or five-fiftieths or five-twenty-fifths of that amount, making still $40, $80, or $160 his dividend. The number composing the class makes no proportional difference in the results.

The compound amount of all these dividends in excess of the compound amount of the fifty dollars the policy-holder

himself contributed, **should be added to the $5,694.57 cash in hand from accumulated savings,** to make the comparison a fair one.

Again, how many of the original class of 1848, besides this policy-holder, would be alive and paying in 1884? If there is more than $50,000 insurance in force on the persisting members of a class formed thirty-seven years ago (?) find out when the total will be reduced by death and lapse to that amount, **and then add $5,000 to the sum of $5,694.57, and accumulated dividends, to determine the whole advantage of the system of the Dominion Safety Fund Life Association over that of level-premium insurance.**

Again, we ask, is the high Reserve expedient?

ENDOWMENT INSURANCE.

The preceding *comparison of results* is based upon past rates of interest to correspond with the rates by which the dividends of the level-premium policy were made.

We shall now vary the comparison, again leaving out the Safety Fund, and compare results with an Endowment Policy by level-premiums, and four per cent. interest.

Insurance Commissioner Tarbox, of Massachusetts, in his Report for 1884, says: "I am moved to express a regret, shared in, I believe, by the conservative and most sagacious men in the business, that our insurance establishments have adopted schemes of insurance whereby they have become so largely institutions of investment. Twenty years ago endowment insurance constituted less than one-twelfth of the business of the companies. Now it is fully one-fourth. Of the present funds of the companies, not less, I judge, than a hundred million dollars is accumulation on account of endowments and Tontines. This may be legitimate, in a certain sense, *but has no just relation to life insurance.* To unite, more than need be for the assurance of its contracts, the proper business of an insurance company with the functions of a savings bank, makes a combination both incongruous and unwise. That the ordinary short-term endowment, which is a little insurance and a great deal investment, is not desirable as either, *is capable of mathematical demonstration,* and is alike impolitic for the companies and unprofitable for the policy-holder. The eloquence of the solicitor, inspired by the hope of a liberal commission, may deceive the uninstructed, but cannot impeach the fact. A provident person will do wiser to buy his insurance of an insurance company, and make his deposits, if he wishes to make investments of that character, with some regular savings institution whose

sole business is the administration of trust funds. The endowment assured, if he lives out his term, realizes no advantage from the endowment part of his contract, and if he dies within the term he loses on the insurance part the difference between endowment and insurance rates. *As for the company which deals in endowments, it thereby needlessly assumes the obligations and responsibilities of a banker in addition to the obligations and responsibilities of an insurer, and prejudices its safety as an insurance institution by exposure to the dangers incident to its banking operations.* If these propositions are well-founded, it results that sound policy should regard with disfavor the inventions of investment insurance which recent practice has unwisely grafted on the original system.

"There is a moral as well as commercial and politic side to this matter. The only legitimate income of an insurance company in the nature of profits is the gain from its funds. All of its other revenue not used for payment of losses and expenses is justly due to be returned to those who contributed it, not as profits, but as overcharge on cost of insurance. *That an insurance company can be relied on to manage funds to better advantage than ordinary institutions of investment is not credible.* From these clear premises the conclusion is inevitable that an insurance company can realize superior profits for some of its investment policy-holders only at the expense of its other policy-holders. What somebody gains somebody else must lose! Massachusetts has signified by just legislation her disapprobation of such mercenary commerce, and sought to divorce insurance from speculation."

Why should the divorce not be granted? Who ever heard of Endowment Investments, or of Tontine betting on ability and willingness to pay Annual Premiums in the same company for a term of years, being attached to Fire Insurance; or, who would claim that such a combination would strengthen those companies which now apply all their skill and energies to furnish protection to their patrons against loss by fire? Then why should so beneficent an institution as Life Insurance ever have been degraded by an alliance with gambling speculations?

The reflecting mind will do well to ponder the timely words of Commissioner Tarbox, and especially these:—

"A provident person will do wiser to buy his Insurance of an Insurance Company, and make his deposits, if he wishes to make investments of that character, with some regular Savings Institution whose sole business is the administration of Trust Funds,"

and then carefully examine the following calculation, which fully establishes his position.

Making deposits in a Savings Institution alone is not sufficient. The risk of dying before the deposits amount to an adequate provision for dependent ones is ever impending, and can be provided for only by Life Insurance.

Then, you who want Endowment and Life Insurance, compare the New Way suggested by Commissioner Tarbox with

THE OLD WAY.

The Annual Premium, at age 32, next birthday, to secure an endowment Policy of $5,000, payable in 15 years or earlier death, varies in Level-Premium Companies from $320 to $365. Take the smaller sum and see how it works out by

THE NEW WAY.

Deposit the same amount, $320, annually in Bank, and cheque out each year the premiums required for $5,000 insurance in this Association, adding initial premium the first year. Your bank account—endowment—and your insurance will stand each year as in the following

COMPARATIVE TABLE.

YEAR.	1 Amount payable by this Association in case of death.	2 Amount of Endowment Fund in Bank at end of each year; interest at 4 per cent.	3 Total Amount that would be realized any year, in case of death—being Bank Deposit and Insurance.	Amount payable by a Level-Premium Co. any year in case of death, or at end of 15 years, if living.	YEAR.
	$	$	$	$	
1st Year.	5,000 00	258 34	5,258 34	5,000 00	1st Year.
2nd "	5,000 00	550 10	5,550 10	5,000 00	2nd "
3rd "	5,000 00	852 70	5,852 70	5,000 00	3rd "
4th "	5,000 00	1,166 57	6,166 57	5,000 00	4th "
5th "	5,000 00	1,492 16	6,492 16	5,000 00	5th "
6th "	5,000 00	1,829 94	6,829 94	5,000 00	6th "
7th "	5,000 00	2,180 40	7,180 40	5,000 00	7th "
8th "	5,000 00	2,544 05	7,544 05	5,000 00	8th "
9th "	5,000 00	2,921 41	7,921 41	5,000 00	9th "
10th "	5,000 00	3,313 03	8,313 03	5,000 00	10th "
11th "	5,000 00	3,719 49	8,719 49	5,000 00	11th "
12th "	5,000 00	4,141 37	9,141 37	5,000 00	12th "
13th "	5,000 00	4,579 29	9,579 29	5,000 00	13th "
14th "	5,000 00	5,032 65	10,032 65	5,000 00	14th "
15th "	5,000 00	5,502 07	10,502 07	5,000 00	15th "

The two ways of providing an Endowment, coupled with Insurance, cost the same—$320 per year, but **the advantages of the New Plan appear under all possible conditions.**

I.—Should you live, and persist to the end of 15 years:

(1) By the New Way you have over $500 more Endowment than by the Old. (See column 2.)

(2) By the New Way you have $5,000 Insurance still in force, which you must forfeit by the Old, and be re-examined to re-insure.

II.—Should you live, but from adversity or because your capital can be better invested in your own business, you fail during the 15 years to make an annual deposit:

(1) On the New plan you are not compelled to enter upon tedious and one-sided negotiations for the sale of your Policy, as on the Old, but can draw your whole "reserve" (column 2) by writing a cheque.

(2) On the New plan you need not forfeit your Insurance because you no longer make Endowment deposits, as on the Old, but can continue to protect your family when they most need such protection,—in adversity, or when your capital is involved in speculation,—by small payments from your Bank account.

III.—Should you die during the 15 years:

On the New plan your family would draw not only the $5,000 Insurance (column 1) as on the Old, but the Bank account (column 2) besides, which, as shown in column 3, is a most valuable advantage.

It may be objected that our comparison is not a fair one, as a Level-Premium Company would make rich dividends from profits.

With any profits to the few long purses by losses from the many short purses, as a result of Tontine gambling where a considerable part or the whole of the Endowment Fund is the wager, we have nothing to do.

Regarding legitimate profits, we answer:—with a premium relatively so low as $320; a rate of mortality as high

as is provided for in the premium scale of this Association; and money worth only 4 per cent., no Level-Premium Company would make any dividend whatever. It is expensive banking when the agent receives from twenty-five to sixty per cent. of the first deposit, and from two and a half to seven and a half of succeeding ones, as commissions!

If money is worth six per cent. you can realize it by as safe investments as in the best company, and your gains from this source would be equal to a cash dividend at end of five years of $90; another at end of ten years of $272.60; and another at end of fifteen years of $492.50. A company making as rich dividends would be lauded for liberality. The magic wand of compound interest waved over your own money does it all, and of that wand no insurance company holds exclusive possession.

The accumulating power of compound interest is wonderfully underestimated by the insuring public; otherwise, endowment insurance,—aye, the level-premium system itself—never would have had an existence. The trained agent of that system can take the most inadequate results for the premiums paid and astonish his patrons with the munificence of his company; but when those results are tested by cold calculation, as in the preceding tables, the astonishment is that such companies ever for an instant held a place in popular favor.

We have seen that the boasted results of a boasted company are over two thousand four hundred dollars less than the deluded policy-holder should receive for his expenditure; and the question is forced upon us, What has become of his money? We shall not attempt an answer.

Our task is finished. We have taken the reader through the labyrinths of level-premium mystery, and dispelled many of the delusions which those companies have fostered; we have laid bare the foundations upon which their dogmas rest, and exposed the many fallacies of their creed.

We have pointed out the weaknesses of assessment systems, and shown how alone they can hope for permanence.

Yet, those systems, with all their weakness and uncertainty, and the level-premium system, with all its injustice, all its inconsistencies, and all its abuses, have been an untold blessing to our race.

For generations they have sweetened the sleep of millions of devoted husbands and fond fathers, as with throbbing brain and wearied limbs they have laid down to rest beneath the ægis of the life insurance contract; they have softened the

pillow of ten thousand sufferers, and robbed death itself of its sharpest pang; they have entered those homes in their darkest hour with the light of hope to the widow's heart and the earnest of continued home comforts to her fatherless babes.

When we consider how noble is this one mission of life insurance, we are amazed that ignoble means ever have been deemed necessary to secure it popular favor,—that it ever should have been allied with the vice of gambling speculations,—that it ever should have fallen the victim of grasping avarice.

The public have been educated to regard life insurance what it is not, rather than what it is. To dispel the delusions,—to remove the dross which too long has concealed the pure gold of life insurance as protection of the unity and comforts of home after the arm which upheld it is paralyzed in death,—to redeem this most beneficent of human institutions from the grasp of error and of evils, is a task worthy a more potent pen. Error, long rooted, is slow to die; evils protected behind the bulwarks of inordinate gains are hard to dislodge; but "truth crushed to earth shall rise again," and in its rising we shall witness the triumph, all over this broad Dominion, of the abiding principles of the

DOMINION SAFETY FUND LIFE ASSOCIATION.

APPENDIX.

DETAILS OF SAFETY FUND SYSTEM.

THE ASSOCIATION furnishes assurance in the following amounts:

Applicants fifteen, but not more than fifty years of age at last birthday, from one to five thousand dollars; fifty-one, but not more than fifty-five at last birthday, from one to three thousand dollars; fifty-six, but not more than sixty at last birthday, one or two thousand dollars.

The present limit in the amount of assurance offered will be extended from time to time as the Association grows older, as prudence shall permit.

Each application must be accompanied by the

INITIAL PREMIUM.

$10 for	....	$1,000	Assurance.
$14 "	....	$2,000	"
$17 "	....	$3,000	"
$20 "	....	$4,000	"
$23 "	....	$5,000	"

This premium is payable ONCE ONLY, and is in addition to the regular premiums indicated by the following table, which are payable from the issue of the policy. It is to be collected by the agent who receives the application, and its amount, less cost of medical examination, will be returned if the risk be declined.

The regular premiums, as per table, are to be remitted to the Home Office, unless a special notice under the hand of the Secretary direct their payment to be made elsewhere.

Quarterly premiums are regularly due on the first of March, June, September and December of each year, of which thirty days' notice will regularly be given.

To bring the premiums of the whole membership due on these days, *the first one will not be an even quarterly premium*, but such a proportion thereof as will carry the policy to next regular quarter day, when the first full quarterly premium will be due.

If, however, the date of issue be within thirty days of the next regular quarter day, the fractional premium will be added to the next full quarterly premium.

The amount of this first premium, determined by the date of issue, will be endorsed on the back of each policy, and a notice thereof will be mailed to the address of the entrant. Its payment must be made before the policy will take effect.

Should any prefer to regularly pay annual instead of quarterly premiums, the proportion for the fractional quarter will be added to the first premium so paid, and a discount of two and one-half per cent. allowed.

No discount will be allowed on semi-annual premiums.

In order to a perfect understanding between the Association and all its policy-holders, every notice and receipt for premiums specifies what part is for *Safety Fund*, what part for *Cost of Insurance*, and what part for *Expense of Management*. Thus the policy-holder can always know what is being done with his money, and if at any time he desires to test the accuracy of the book-keeping, he can do so by enquiring the amount of his credits to all or any of the three funds, which must correspond with the amount of his receipts.

The *Safety Fund* payment is ten dollars for each thousand dollars insurance, and is regularly payable one dollar per quarter per thousand; wherefore the notices and receipts for the first ten quarterly premiums will contain an item of $1 per $1,000 insurance, for this fund.

The assured maintain the Mortuary Fund by their payments as *Cost of Insurance*.

The principles regulating the ratios of cost of insurance at the several ages, and the amount constituting the normal cost of risks, have been clearly presented, and the following table is based on those principles and that amount.

The notices and receipts for every premium will contain an item for *Cost of Insurance*, the amount of which will be

determined by the age, at last birthday, when the notices are written.

The *Initial Premium* having been paid, the *Expense of Management* is limited to three dollars per annum, or seventy-five cents per quarter, on each thousand dollars insurance; wherefore each notice and receipt for premiums will contain an item of 75c. per $1,000 insurance for this purpose.

Thus, for ten quarters, or until the Safety Fund deposit of $10 per $1,000 insurance is completed, the notices and receipts will contain three items, and thereafter but two.

After the policy has been registered as of a Safety Fund class for five years, another item will be added in the notices and receipts, stating the amount of *credit as Safety Fund dividend.* This dividend may not be large in the earlier years of the policy, but will increase as the policy grows older, and in time will be very valuable to persisting members.

With this detailed explanation the reader can readily analyze the quarterly premiums stated in the following table, into their component elements.

Take age 39, $1,000 insurance, for example.

A policy holder reaches that age before he has completed his Safety Fund deposit. His premium, as stated in column A, is $3.75, and is analyzed thus:—

Safety Fund Deposit, ...	$1 00
Cost of Insurance, ...	2 00
Expense of Management, ...	75
Total Premium, ...	$3 75

Another reaches that age after he has completed his Safety Fund Deposit. His premium, as stated in column B, is $2.75, and is analyzed thus:

Cost of Insurance, ...	$2 00
Expense of Management, ...	75
Total Premium, ...	$2 75

The table gives the premiums for one, three, and five thousand dollars insurance, from which that for two and for four thousand can be readily computed.

TABLE

Of Natural Quarterly Premiums, including Expense of Management.

THIRTY OFFICES' EXPERIENCE IN CANADA, AND TWENTY-FIVE NORTHERN STATES AND TERRITORIES.

The Safety Fund Deposit of $10 on each $1,000 insurance would be completed by paying according to columns headed "A" FOR TEN QUARTERS, after which payments would be made according to columns headed "B."

AGE.	$1,000		$3,000		$5,000		AGE.
	A	B	A	B	A	B	
15 to 21	$3 15	$2 15	$9 45	$6 45	$15 75	$10 75	15 to 21
22	3 17	2 17	9 51	6 51	15 85	10 85	22
23	3 19	2 19	9 57	6 57	15 95	10 95	23
24	3 21	2 21	9 63	6 63	16 05	11 05	24
25	3 23	2 23	9 69	6 69	16 15	11 15	25
26	3 25	2 25	9 75	6 75	16 25	11 25	26
27	3 27	2 27	9 81	6 81	16 35	11 35	27
28	3 31	2 31	9 93	6 93	16 55	11 55	28
29	3 35	2 35	10 05	7 05	16 75	11 75	29
30	3 39	2 39	10 17	7 17	16 95	11 95	30
31	3 43	2 43	10 29	7 29	17 15	12 15	31
32	3 47	2 47	10 41	7 41	17 35	12 35	32
33	3 51	2 51	10 53	7 53	17 55	12 55	33
34	3 55	2 55	10 65	7 65	17 75	12 75	34
35	3 59	2 59	10 77	7 77	17 95	12 95	35
36	3 63	2 63	10 89	7 89	18 15	13 15	36
37	3 67	2 67	11 01	8 01	18 35	13 35	37
38	3 71	2 71	11 13	8 13	18 55	13 55	38
39	3 75	2 75	11 25	8 25	18 75	13 75	39
40	3 79	2 79	11 37	8 37	18 95	13 95	40
41	3 83	2 83	11 49	8 49	19 15	14 15	41
42	3 87	2 87	11 61	8 61	19 35	14 35	42
43	3 91	2 91	11 73	8 73	19 55	14 55	43
44	4 01	3 01	12 03	9 03	20 05	15 05	44
45	4 11	3 11	12 33	9 33	20 55	15 55	45
46	4 23	3 23	12 69	9 69	21 15	16 15	46
47	4 35	3 35	13 05	10 05	21 75	16 75	47
48	4 49	3 49	13 47	10 47	22 45	17 45	48
49	4 65	3 65	13 95	10 95	23 25	18 25	49
50	4 83	3 83	14 49	11 49	24 15	19 15	50
51	5 01	4 01	15 03	12 03	25 05	20 05	51
52	5 21	4 21	15 63	12 63	26 05	21 05	52
53	5 43	4 43	16 29	13 29	....	22 15	53
54	5 67	4 67	17 01	14 01	....	23 35	54
55	5 93	4 93	17 79	14 79	....	24 65	55
56	6 21	5 21	18 63	15 63	....	26 05	56
57	6 51	5 51	19 53	16 53	....	27 55	57
58	6 83	5 83	....	17 49	....	29 15	58
59	7 19	6 19	....	18 57	....	30 95	59
60	7 59	6 59	....	19 77	....	32 95	60

N. B.—The excess of column A over column B for ten quarters constitutes the Safety Fund, from which ever increas-

ing dividends will be made on all policies registered in any class over five years, which will largely reduce the premiums to persisting members. The principal of the Safety Fund will be used to pay an endowment on the last policy in force of each one hundred registered in any class.

Dividends from this fund will be reached two years earlier by completing the deposit during the year of entry, and this any member may do if he desires.

INSURABLE INTEREST.

No policy will be written in favor of or assigned to any person not having a legal Insurable Interest in the life of applicant. Married women will be insured only in favor of their own children, except when the beneficiary has an actual moneyed interest in the proposed life.

EXTRA PREMIUMS ON HAZARDOUS RISKS.

The experience of the "Thirty Offices" shows beyond any question that the risk on female is greater than on male lives. Wherefore, to preserve equity, an extra premium of seventy cents per quarter per thousand dollars insurance is charged upon all women insured, until past the age of 50 years.

Save in exceptional cases, unmarried women and women who have never had any children will not be insured until past 50 years of age.

VACCINATION.

No risk of death by small pox will be assumed except on members who have been effectively vaccinated. Those not vaccinated at time of application can obtain vaccination within 90 days, or they will be required to relieve the Association of the risk of death from small pox by a clause to that effect inserted in the policy.

TABLE OF EXTRA QUARTERLY PREMIUMS, FOR EACH THOUSAND DOLLARS RISK, FOR HAZARDOUS OCCUPATION.

Baggage Master on Trains, ...	$1 00
Boatman — extra Premium, determined by nature of risk,	
Chemist (manufacturing), ...	2 00
Circular or Buzz Sawyer, ...	2 00
Conductor on Passenger Trains, ...	1 00
Conductor on Freight, Mixed or Construction Trains,.....	1 50
Employe or Laborer on Construction Trains, ...	2 00
Engineer on River, Lake, Gulf, or Bay Steamers, ...	1 00
Engineer or other Officer of Sea Steamers, ...	2 00
Engineer of Stationary Engine — extra Premium, determined by special circumstances.	

TABLE OF EXTRA QUARTERLY PREMIUMS.—*Continued.*

Express Messenger on Trains,	1 00
Fisherman (inshore or harbor),	1 00
Fireman (City paid Fire Department),	2 00
Fireman on River, Lake, Gulf or Bay Steamers,	1 00
Lumberman (laboring),	2 00
Master or Mate of River, Lake, Gulf, or Bay Steamers,	1 00
Master or Mate of sea-going Vessel or Steamer,	2 00
Mail Route Agent,	1 00
Miners in non-explosive Mines,	1 00
Night Watchman,	1 00
Pilot,	1 50
Policeman,	1 00
Quarryman,	1 00
Raftsman,	2 00
Steward on Lake or Sea Vessels,	1 00
Switchman,	1 00
Yard Master on Railroad,	1 00

Extra Premium on other Hazardous Risks fixed by special circumstances.

RISKS NOT ACCEPTED.

Brakeman on Railway Trains.
Bar-Keeper.
Brewer.
Beer-wagon Driver.
Car-Coupler.
Cartridge-maker.
Dry Grinder.
Engineer on Locomotive.
Fireman on Locomotive.
Furnace-man in Iron Foundry.
Founder in Iron Foundry.
Fisherman (deep sea).
Furrier-worker.
Liquor Dealer (retail).
Powder Manufacturer.
Pyrotechnist.
Percussion Cap Maker.
Pitman in Iron Foundry.
Puddler in Iron Foundry.
Sailor (common).
Underground Miner (explosive).
White Lead Manufacturer.
All other Extra-Hazardous Occupations.

Continued.

......	1 00
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